DOCUMENT RESUME

ED 213 041 CS 206 759

AUTHOR	Harste, Jerome C.; And Others
TITLE	Children, Their Language and World: Initial Encounters with Print. Final Report.
INSTITUTION	Indiana Univ., Bloomington. Dept. of Language Education.
SPONS AGENCY	National Inst. of Education (ED), Washington, D.C.
PUB DATE	Aug 81
GRANT	NIE-G-79-0132
NOTE	618p.; Parts may not reproduce well.
EDRS PRICE	MF03/PC25 Plus Postage.
DESCRIPTORS	Age Differences; *Developmental Stages; Handwriting Skills; *Language Acquisition; Language Experience Approach; *Language Processing; *Language Research; *Manuscript Writing (Handlettering); Reading Skills; Socioeconomic Status; Writing Research; Writing Skills; Young Children
IDENTIFIERS	*Reading Writing Relationship

ABSTRACT

The first of a two-volume final report, this document focuses on a study of written language growth and development among 3-, 4-, 5-, and 6-year old children. The first section of the document contains five essays dealing with race, sex, age, socioeconomic status, and language; orchestrating the literacy event; reading and writing as context-specific literacy events; stages to strategies in literacy development; and a methodology for studying written language growth and development. The major portion of the document contains an analysis of the first three of seven simple tasks the subjects of the study were asked to perform: reading print common to their environment, writing their names and anything else they wished to write, and drawing a picture of themselves and signing their names. A detailed description of the procedures followed in the administration of these tasks is included in an appendix, as is a copy of the taxonomy derived from the data for purposes of data reduction and analysis. (A forthcoming volume will report on the remaining four tasks.) (HOD)

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CHILDREN, THEIR LANGUAGE AND WORLD: INITIAL ENCOUNTERS WITH PRINT

FINAL REPORT
Project NIE-G-79-0132

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The research reported herein was supported by the National Institute of Education. The opinions expressed herein, however, do not necessarily reflect the position or policy of the National Institute of Education, and no official endorsement by that group should be inferred.

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Acknowledgements

We want to express our thanks to the parents of our informants, the Indianapolis Public Schools, the Early Childhood Learning Center, Little People's Prep, the administrators in these organizations, and the many others who in one way or another assisted us in contacting and videotaping our informants. Special acknowledgments must also be given to the many teachers from around the country who, after listening either to us or to our informants, shared their surprise, their dismay, their insight, their hope, or their research, but who, in so doing, became informants in their own right.

We wish to give very special acknowledgment to the following individuals who participated as research associates on the project: Chrystine Bouffler (Riverina College of Advanced Education, Wagga Wagga, Australia), Katharine Busch (Indiana University), Joan Chubb (Indiana University), Linda Crafton (Northeastern Illinois University), Karen Feathers (Indiana University), Marjorie Siegel (Indiana University), and David Whitin (Indiana University).

Special acknowledgment must also go to Margaret Atwell (California State College, San Bernardino), Diane DeFord (Southern Illinois University), Mary Hill (Westminster College), Stephen Kucer (Indiana University), and Lynn Rhodes (University of Colorado, Denver) who helped us embark on this effort and who have faithfully followed up on related research which both complements and extends this program of research. To them, and other graduate students past and present, our thanks for extending not only our research but also our thinking.

Readers might well wish to compliment, as we do, several individuals who have greatly increased the text potential of this graphic display by their typing and editing efforts. They include Dorothy Menosky (who made us start over), John Schroeder (who creatively interpreted our handwritten drafts), Jan Harste and Judith Newman (who tried to help us understand the role of convention), and all those graduate students whose input is helping us specify what the next text potential should be.

We owe a special intellectual debt to Yetta Goodman (University of Arizona) who allowed us to use, and abuse, some of her research procedures. Her continuing consultation has been important to the project.

While there are many to acknowledge, few are as important to this project as are our informants. At their most predictable and unpredictable moments they forced us to grow; leading us to discover and rediscover not only some of their literate secrets but also some of their most literate friends--both young-young (like Zach, Kristie, Eric, Robin and others whom you will soon meet), and young-old (like Vygotsky, Piaget, Dewey, Graves, King, Whiteman, Shuy and others whom you will soon re-meet).

Preface

Formally this document, a first volume of two planned, serves as a final report for a research grant which had as its purpose the exploration of written language growth and development among 3, 4, 5, and 6 year old children. Informally the document serves as a record of our own thinking and hence our own development.

Included in this report are copies of major speeches and papers which we have written from the data collected and analyzed during the course of this grant. These are referred to as articles in the body of the report and can be found in Section 5. The reader may well find it helpful to read these articles prior to reading other sections of this document. The formal component of the report--a series of 5 essays and a formal analysis of 3 tasks--rather than restate what we have already said elsewhere, attempts to summarize major insights, identify findings of particular interest, and point directions for future research.

J. C. Harste
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August 1981

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> When a human society experiences the need for communication over time and space, then written language is developed. Until that time, language is used in a face-to-face here and now context and oral/aural language suffices. But when a society is literate, written language is functional for the society and members of that society must learn the written form (Goodman and Goodman, 1979).

While we might, as a group, agree with the Goodmans as to the societal genesis of written language, clarification of the particular processes involved in understanding, using, and producing written language is a long overdue educational necessity.

1.0 INTRODUCTION

We began our study of what 3, 4, 5, and 6-year old children know about written language with a good deal of optimism, assured that they know much more about print than what teachers and beginning reading and writing programs assume. In part this optimism was founded in a body of research which preceded our current work (Read, 1971; Chomsky, 1970, 1971, 1972, 1975, 1979; Donaldson, 1978; Graves, 1973, 1978; King, 1978; Clay, 1975; Ylisto, 1977; Halliday, 1975; Cook-Gumperz and Corsaro, 1977; Vygotsky, 1962, 1978; Goodman and Goodman, 1979). In part it was founded on our own work (Harste, Burke, Woodward, 1977; Woodward, 1978) and the work of doctoral students with whom we have had the good fortune to work (Deford, 1978; Rhodes, 1978; Hill, 1978, 1980; Baghban, 1979). What the results of our effort have taught us is that we began not being optimistic enough; that children know much more than

1.0 (Continued)

we or past researchers have ever dared to assume, and that many of the premises and assumptions with which we began must give way to more generous perspectives if research and understanding are to proceed.

For purposes of our study of written language growth and development we videotaped our 3, 4, 5, and 6 year old informants performing a series of simple tasks: (1) reading print common to their environment; (2) writing their name and anything else they wished to write; (3) drawing a picture of themselves and signing their name; (4) dictating a language experience story and reading and rereading it; (5) reading a book; (6) writing and reading a story; and (7) writing and reading a personal letter. Only tasks 1-3 will be reported in this the first of two documents covering this project. A detailed description of the procedures followed in the administration of these tasks is included in an appendix of this report as is a copy of the taxonomy derived from the data for purposes of data reduction and analysis. There is no attempt here formally to lay out and present all of the data or all of the analyses which we have performed on the data. We used our taxonomy and descriptive data as heuristics to explore our own assumptions and to develop and test those leads which we felt could help us in our goal of mapping written language growth and development.

To date we have worked with more than 68 informants in this program of research. These children come from lower, middle, and upper socioeconomic circumstances, represent both Black and White, and reside in both suburban and urban settings. Some of the children have been

1.0 (Continued)

on-going informants to our studies for the past 5 years (Woodward, 1978-81). Funding for various projects has come from the Proffit Foundation, National Council of Teachers of English, and the National Institute of Education. While the insights we report here were stimulated by our preschool inner-city informants, data from other studies were used to contrast and clarify findings. Often because of patterns we saw and issues raised by the data collection procedures we used, other smaller studies were undertaken. These anecdotal data are used in the report and serve the same purpose for which they were collected; namely, to clarify theoretical points and verify suspected patterns. Joan Chubb's paper (see article 5.8) is an example of such a follow-up or side study.

This report has been written to and for our colleagues in hopes of pushing their thinking and stimulating new debate and research. It is best viewed as a milestone in the midst of a program of research. In it we attempt to record some of the general and specific insights which our informants gave us, some leads which merit further investigation, but most of all the present and long term benefits of kid watching for teachers, researchers, and theoreticians.

We preface the analysis of the research tasks with a series of 5 essays on topics which both cut across these tasks and which have taken on heightened significance for us in the course of the project. They deal with race, sex, age, and socio-economic status; orchestrating the literacy event; reading and writing as context specific literacy events; stages to strategies; and methodology for studying written language growth and development.

1.1 ON RACE, SEX, AGE, SOCIO-ECONOMIC STATUS AND LANGUAGE

In designing this study we, as many other researchers, blocked on certain key variables. Given a review of the literature, factors such as sex (Girls are better readers than boys), race (Black children are more likely than whites to end up in need of remedial instruction), setting (Inner city children perform less well on national assessment than do children from suburban areas), and age (Children are ready for formal reading insturction at the age of 6), were seen as relevant.

We now, more than ever before, question the importance of these variables. Given the characteristics of the responses to environmental print on which we coded, sex, race, and setting, they failed to distinguish between or among age groups. If girls are better readers than boys, this is not evident in the quality of their responses to print at the 3-year old level, the 4-year old level, the 5-year old level, or the 6-year old level. If Blacks are more likely to end up in remedial reading classes this is not evident among the responses made by Black and White children at particular age levels. If inner-city children have more difficulty than suburban children in terms of learning to read and write, this, too, is not evident in the quality of the responses they make to environmental print.

Because we had recently completed research using the environmental print task with children coming from middle to high socio-economic class families, we were able to compare the response characteristics of children in this sample to those in our earlier sample. Again, no significant differences were found. If parental socio-economic status is

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a factor, this factor does not show up in response patterns at these particular age levels.

Nor did children coming from single parent families seem to be at a disadvantage in relationship to children coming from two-parent families. Many lower SES children from single parent families where the parent was on welfare were seemingly as provided for, in terms of the quality of the written language encounters they were having, as were some high SES children coming from two parent homes.

Some lower SES families took what money they had to buy books, go to the library, or even save to go to the ballet; others did little. Fortunately the children often had better ideas of how to use reading and writing functionally than did their parents. One parent, for example, reported that he did "nothing" to help his child learn to read and write. Later in the interview he reported that his son "drove him nuts" by playing cop and writing out tickets when family members did anything wrong--like leaving dishes in the family room or coming late to supper.

Many middle and higher class homes, on the other hand, were far from ideal literacy learning environments. Many children in these homes, because both parents worked, were left with baby-sitters or involved in preschool programs that had little or no interest in literacy. While the homes were supposedly better literacy environments, little of this benefit automatically shifted down to the children in any direct observable way that we could see.

1.1 (Continued)

There did not, in this regard, seem to be big distinctions between lower, middle, and upper class homes. Some homes, whether upper or lower class, were rather sterile literacy environments while others were filled with on-going written language events and were seemingly hard places in which to avoid print involvement.

Some lower, middle, and upper class parents seemed bent on "teaching" their child to read and write, yet this factor did not seem to distinguish between children's performance on our tasks other than to make these children initially reluctant to demonstrate what they knew. The result of our experience leads to a conclusion that lower and upper socio-economic status, as it relates to literacy, is more a "mental attitude" than it is anything else. If the parent or parents perceive themselves to be middle class, despite their residence in a lower socio-economic neighborhood, they tend to provide middle class kinds of literacy related experiences for their children--books, visits to the library, plays, etc.

Telephone interview data collected from the parents of children in our sample, though incomplete (32 parent interviews/48 children), does suggest that homes provide varying "cultures" for literacy and literacy learning. Several factors seem to be identifiable and distinguish these alternate home literacy learning cultures.

The most salient home factor relating to literacy learning is one we have termed "availability and opportunity to engage in written language events." Homes where books were out and readily available,

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where paper, pens, pencils, crayons, magic markers and other instruments were handy, where children seemed quite naturally to be included and involved, seemed to provide the key conditions for children to go exploring and for parents to involve themselves in using and encouraging reading and writing whether they "technically" reported that they knew what they were doing or not. In fact, some of the worst disasters relative to literacy development for both parents and children seemed to occur and revolve around those times when the parents set out to formally "teach letter names," "teach the alphabet" or engage in other school-like reading and writing tasks. The quantity of literacy materials (number of books, for example) is not seemingly the key element but rather that what material there is, is highly accessible so that both parents and children have to be more or less constantly tripping over it. When paper and books were in the way, children used them; often coming up with quite creative uses (writing out a menu for supper, writing traffic tickets, writing notes, posting signs on doors, labeling their toys during play). When books were in the family room, children were read to, an activity which was seemingly equally initiated by both parents and children. If the books, pens and paper were not in the way, literacy activities were much less frequent and only occurred on "high occasions" as one parent called them, meaning when new books arrived, a trip to the library was made, or when the child was asked to contribute a picture or something to send along in a letter. Some homes stored quantities of little-used literacy materials. Others

1.1 (Continued)

made creative and concentrated use of more minimal quantities of readily accessible materials.

Because we were working with 3-year olds in a local preschool program one morning per week, we decided to follow-up on this insight. Before we made any physical changes we observed the classroom and attempted to map where children spent their time. Once we had this data we attempted to "litter the environment with print." We brought the book corner out to the center of the room, added a writing table with different kinds of paper, writing instruments, envelopes, and stamps, put a pad of note paper for taking messages by the play telephone in the home area, initiated a "Sign-In" activity whereby children kept their own attendance, and in general tried to accent and highlight reading and writing activities.

Although this particular 3-year old group only met once a week and the study was not done very formally in that we also increased the amount of literacy activities which previously had been available, the data we did collect suggested that children spent from 3 to 10 times the amount of time they normally had in direct reading and writing activities. This did not include any measure of the amount of time children were not directly involved, such as overhearing messages read to the teacher by some child who had taken it on the telephone.

If there is a second home factor which seems significantly related to some early literacy advantage, that factor has to be called "inclusion." Whether by design or default, children who were reported

1.1 (Continued)

as always being "drug around" on shopping trips, trips to the courthouse, trips to the doctor's office, trips anywhere, whether or not the trip seemingly matched the child's developmental interest or not, seemed to have an advantage. These same children who were reported as always "under foot," who naturally got included in cooking and setting the table, who were reported as writing out shopping lists and reading them during shopping, who were given paper and pen to write a letter to grandmother while the adult wrote letters or sent bills, who were given the occupant mail to open and read while the mother opened and read the rest of the mail, were seemingly at an advantage. Most of these activities had no great literacy teaching design behind them in the parent's eyes, but were done more by virtue of the fact that the child was about and involvement seemed natural largely because it was the only logical way the parent had for getting about the business of the day.

Interestingly, the other thing that strikes one while looking over this parent interview data is the fact that all children at this age seem to have an almost natural affinity for books and paper and pencil activities if the environment makes these things available. This observation was further borne out during data collection. Despite the quality of our research tasks, which could hardly be considered exciting literacy events, children were eager to participate, did so quite freely, and were often sorely disappointed when the week of data collection was up. Because of the nature of these tasks children could make of them what they wanted and obviously found the experience rewarding.

1.1 (Continued)

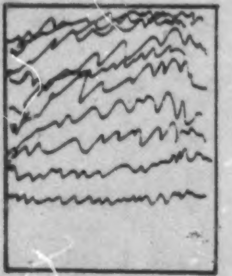
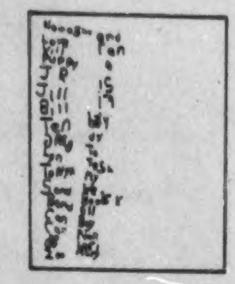
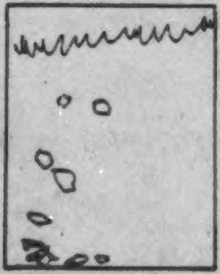
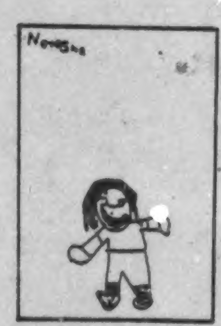
This does not mean, of course, that all children start at the same place at the time of formal language instruction. It does mean that knowing the child's sex, race, level of parental income, parental educational level, or where the child lives are poor predictors of what the child knows and can do relative to literacy.

Given our experience, we must conclude that one must approach all children as if they know quite a bit about reading and writing regardless of the circumstances of their birth. Working from that assumption, open ended activities should be designed in order to allow the child to demonstrate, use, and build upon the knowledge already acquired about literacy.

Children's response characteristics do seem to vary as a function of age, with older children making an increasing number of expected or conventional responses in both reading and writing. One is immediately struck by the seeming differences between 3-year old responses as a group and 6-year old responses as a group across tasks. Figure 1 contrasts some of these differences. The reading responses of 3-year olds look much less conventional than do the reading responses of 6-year olds. The writing and drawing samples of 3-year olds are much more difficult to understand than are the more conventionalized products of 6-year olds. The story well-formedness of 6-year olds over 3-year olds is equally striking. There came a point during our research project when team members who volunteered to work with the 6-year old data were considered to be taking the easy way out, avoiding a real challenge.

1.1 (Continued)

1.1 Figure 1. Three & Six-Year Old Responses as Products: A Comparison Across Tasks

3-YEAR OLDS	6-YEAR OLDS
Task-Environmental Print	
Print Setting -Brush Teeth -Toothpaste -Teeth -Wash Your Teeth -It's got a name on it. -Toothpaste -It's called Aim -I don't know -Crest -Cavities -Toothbrush -Toothbrush	Print Setting -Crest -Toothpaste -Crest -Crest -Toothpaste -Crest -Crest -Crest -Crest -Crest -Crest -Crest
Task-Language Experience Story	
Heather (as dictated by child) Trick or Treat. Candy Mints. They goes driving. They go hunting. They going to drive down the spoon. I like cottage cheese. Cottage cheese. I like faces. I like everything. My Daddy.	LaShell (as dictated by child) One day it was three little bears. They had pork chops. Then they went to a park. Then a little girl came to the little house. She ate the father pork chops. She said, "Oh, it is too hot!" Then she ate the mother pork chops. Then she said, "It is too soft."
Task-Uninterrupted Writing	
	
Task-Uninterrupted Drawing	
	

1.1 (Continued)

In comparison to the 3-year old samples, the 6-year old data was, as one member of the research team observed, "duck soup." In retrospect this attitude is interesting, especially in light of the fact that many of the children who we came to perceive as "very sophisticated 6-year olds" were likely to be in formal reading and writing school programs which assumed they knew nothing about written language.

One important observation that can and must be made, given the sheer weight of this data, is that this is a period of phenomenal literacy growth for all children. To squander this period as many homes do is sad indeed and speaks directly to the need for parent literacy programs like that which Mary Hill (1980), an early member of our research team, has developed and field tested.

There is more to be said about age as it related to literacy growth, however. In further analysis of data, we have found that differences reside more frequently in the product than they do in the process of literacy. This point we have attempted to explicate in a series of papers which is included in this report (see articles 5.6.1, 5.6.2, 5.6.3, 5.9).

Of particular interest in understanding why one might think of age as a non-correlate of written language growth and development is the fact that when children have equal opportunity, the characteristics of the responses across age show no difference. During our experiment, Wendy's opened a new hamburger place in the residential area surrounding our research project. Six-year old and 3-year old children's

1.1 (Continued)

responses to this environmental print item were found to be the same. Age, rather than being the main factor, seems to correlate with number of, or opportunity for, encounters. The real variable then may be encounters rather than age. Age typically falls out as a factor, not because it is the factor per se, but because it generally provides an index to the number of encounters possible. When the number of encounters possible is held constant, age fails to distinguish among or between response characteristics.

We do not wish to over-emphasize the number of encounters and the relationship to literacy, however. Children obviously can learn a good deal from a single significant encounter. We found for example that once children had gone through our first condition on the environmental print task, almost all the responses they made in condition 2 and 3 fell within the set of responses they made in condition 1. Said another way: If you take all of the responses that children initially make to environmental print in the first condition and identify this as a semantic field, well over 97% of their responses to this print on subsequent days, even when presented in random order, fall within the set of chioces they made on the first day. (See article 5.4 for an example of this phenomenon.) Obviously children are rapid learners. Having once had an encounter, subsequent encounters are governed at least in part by their understanding of what worked last time. From a processing perspective the research setting itself acts as a sign which

1.1 (Continued)

obviously allows them access to appropriate schema including response strategies.

Given this phenomenon it may not be the encounter at all that is the key variable but rather the quality of the encounter. Language and language learning are social events. When the encounter which the child has permits feedback, then learning can take place. To illustrate, using a written language example: if the child sees a door marked "Janitor" and she enters thinking it is a girls' lavatory, no one needs to tell her she's made a mistake but yet feedback is provided. Or if an adult says "No, that's not the lavatory," then she can reason and rethink and thus get feedback also. This same process of feedback also worked each time the child makes a correct decision, that is, she sees a sign which says "Girls" and she enters and indeed it is a girls' lavatory. In our research task, given its format, not all naturally available feedback was provided and hence qualitative improvement in responses across conditions was neither always possible nor observed. This does, however, raise the important issue of what responses to environmental print or other written language literacy events would look like under normal conditions where natural feedback was possible.

This issue is an important one to pursue as currently there is much research in reading and writing which suggests time on task is a key variable in literacy learning. Our experience would suggest that not all encounters are of equal worth and that the quality of the

1.1 (Continued)

encounter must be studied in conjunction with time on task if simplistic formulas are to be avoided.

Given these findings and insights we need to challenge the view which holds sex, race, setting, and socio-economic status as significant correlates of literacy. They are not, nor should they be taken to be, causal factors. If they were, one could, knowing these factors, make near perfect predictions. No such cause-effect relationships are evident in our data. Rules of thumb based on correlations must give way to theoretically based principles of language learning. We have begun, we believe, to identify some of these more promising principles.

1.2 ORCHESTRATING THE LITERACY EVENT: HARMONY IN CONTEXT

The twin issues of what are the cue systems of literacy and in what order they occur undergird most differences between existing theories of reading and reading instruction. For example:

- Goodman (1967) defines the cue systems of literacy as semantics (meaning), syntax (the flow of language), and graphophonemics (letter-sound relationships);
- de Beaugrande (1980) defines the cue systems of literacy as pragmatics (the rules of language use in operation in a particular context), semantics, syntax of semantics (the organizational structure of major meaning units in the text), syntax, semantics of syntax (the organizational structure of meaning units at the sentence level), and graphophonemics;
- Halliday (1980) argues that pragmatics is not a separate system but a component of the semantic system of language;
- Smith (1978) is often perceived as arguing that one accesses literacy via the semantic system and with this access comes control of the syntactic and the graphophonemic systems;
- Gough (1972) argues that literacy access begins with control of the graphophonemic system and that meaning comes as a function of the cognitive processing of graphophonemic information at succeedingly higher levels;
- Rumelhart (1977) sees cue systems as interactive with both top-down (semantics to graphophonemics) and bottom-up (graphophonemics to semantics) occurring simultaneously;

1.2 (Continued)

- Harste and Carey (1980) argue that reading comprehension involves semantic transaction, a term they use to highlight the cue system complexes within the graphic display and the relationships these complexes have to meaning potentials for readers.

There has been, in this regard, an unfortunate tendency not only to label the cue systems of literacy differently, but once labeled to study them as factors in isolation from each other. The net result of this fact is that most of the "reading" data we have available reflects what reading looks like under unnatural conditions. Our experience with young children in this study has taught us that natural reading and writing settings, where cue systems are allowed to transact with each other, are crucial in developing our understanding of written language growth and development.

We began our research in this area hoping to identify which cue systems were key to literacy access and control. We now believe this question inappropriate, as what we have learned is that cue systems do not operate independently of one another so that what order begs the issue. Cue systems are, in themselves and in conjunction with one another, important sign systems. Orchestration of these sign systems is a more viable measure of success than is either proficiency in the use of cue systems, or control of such cue systems.

An example may help to clarify this point as well as document changes in our own thinking over the course of this project.

1.2 (Continued)

One of the biggest benefits of working with children is that they in many ways, "catch" you in your own assumptions and are frank enough to tell you about it. One of our favorite pieces of data in this regard came from the son of a very close neighbor. We had, on this occasion, cut out a Ban underarm deodorant advertisement which showed a stop sign with the word Ban on it. The message in the context of the advertisement was clear: "Ban stops wetness."

By cleverly cutting off all surrounding print in the advertisement we had managed to save the stop sign with the Ban printed on it. Our intent, of course, was to determine how young children responded to it, compare these new responses to the old responses we had to a regular stop sign, and thus judge what role print played in the reading of environmental print.

Joe, age 9, knew not only us, but also of our interest in young children and written language growth and development. Interrupting his play, we asked, "Joe, what do you think this says?"

Joe's response stopped our simplistic interest short: "I'll bet that says 'stop' in German or something. That's just the kind of junk you'd carry around to pull out and ask young unsuspecting kids about!"

Along with his humor, Joe taught us more about print processing than the unimaginative bounds of our assumptive experiment. Not only did Joe demonstrate a sensitivity to print, but also a sensitivity to various contexts. The red octagonal shape in relationship to print

1.2 (Continued)

signed "stop"--probably, he supposes, in a foreign language. Further, our physical presence, in relationship to this print setting signed research condition and as such supported his first hypothesis that a foreign print stop sign might well be something we'd possess.

From this perspective, then, Joe's response is an orchestrated and sophisticated literacy decision. In order to understand this decision one must consider the contexts in which the cognitive operations involved in his print processing take place. These contexts are formed by the junction of graphic display and situation which, in transaction with each other become signs which affect text construction. By comparison with the hypotheses which Joe was testing about written language and how it works, the original hypothesis which we were testing pales to insignificance.

It's important in this regard to understand that order of cue system use fails to address the phenomena observed. Clearly Joe was sensitive to print. Clearly also, he was sensitive to context. What is not so evident is that he was also sensitive to meaning and syntax in much more complex ways than may be initially apparent.

It is misleading to see order of cue system utilization as a set of choices as is commonly done in literature which speaks of "top-down" and/or "bottom-up" models of reading. More important than such notions is the fact that, in concert, cue systems operate as a single complex sign system.

1.2 (Continued)

The print setting including the print, its placement on a stop sign, and its relationship to us can be seen as a sign potential which in transaction with a given language user becomes a meaning potential. Other language users less familiar with us and our interests may not see us as signs either directly or in transaction with the print and the stop sign. For them the sign potential changes and hence the meaning potential.

It's also important to understand that the meaning potential of the Ban advertisement essentially changed once it was in our hands rather than in the magazine. In the context of the magazine virtually no one would have hypothesized that it said "Stop" in German. By altering the context we affect not only its sign potential, but also its meaning potential.

This, of course, has important implications, not the least of which is how we think about and define reading and writing. From a sign perspective one need not pose special mechanisms in the brain for reading. Many psychologists, for example, pose the "reading" mind as a single channel processing mechanism and cue utilization as involving the mind switching attention back and forth among available cues. How and why attention is switched is not known, nor is the mechanism in the mind which does this switching. The net result of this perception is what we call the "black box theory" in that all such models end up with things called "pattern synthesizers" or other black boxes which are left unexplained, but where all of the interesting things in reading occur.

1.2 (Continued)

Seeing literacy as a sign utilization phenomenon avoids not only the need for a "black box" but does much to demystify the process of written language literacy.

For us, literacy can be said to begin when we have evidence that the child is using print settings to sign meaning. Reading can be said to begin when we have evidence that the language user has made a decision in the face of a print setting which wouldn't have been made if print were not present. Writing can be said to begin when we have evidence that the child is using print settings to sign meaning.

Notice that all of these definitions avoid the notions of convention and correctness. When the print setting is seen as a sign potential, then alternate meanings are acceptable given a differential knowledge and ability to utilize or pay attention to signs. Proficiency can be seen in both reading and writing as not only differential use of, familiarity with, and knowledge of signs, but a growth in their use and orchestration beyond the conventional norm.

This last point merits further elaboration. Language is a social event. What we learn from an encounter with written language as a member of a community of language users is not only what elements of the graphic display are to act as signs, but what we are to make of them. That this process is culturally specific is an important point to understand.

If the reader might envision the U.S. Army recruiting poster showing Uncle Sam pointing at the passerby and reading, "Uncle Sam Needs

1.2 (Continued)

You!" then this point might be readily illustrated. Envision this poster in a variety of countries. In the United States it (hopefully) signs patriotism and is designed to stimulate the reader's sense of obligation to his country. In Iran it most assuredly would sign something quite different--a meaning most Americans find abhorrent. In Puerto Rico, where the Puerto Rican Independents have fought against statehood, this poster would sign something else again. Even in the United States the poster would sign different things to different groups or subcultures in the society. It may in fact sign two or more things simultaneously, or alternately, our initial interpretation could act as a sign itself to further extend meaning for us. This later process is known as "unlimited semiotics" (Eco, 1979), where semiotics is defined as the study of signs and their meanings.

It is important to understand the signing process as social. It is through interaction with members of one's cultural group that sign identification and signification is established. Literacy learning is in this sense a social event. How this process works is clearly illustrated in the example which follows.

Brad's mother bought Brad, age 2.8, a copy of the picture book, It Didn't Frighten Me (Goss & Harste, 1981). Brad immediately picked it up, leafed through it, and then went back to the front to begin reading it. Looking at the pictures of the animals and noting their teeth Brad said, "He bite." Then looking at the boy in the bed, he added, "But he didn't bite me." For each page, Brad followed a similar

1.2 (Continued)

procedure saying, "An orange alligator in a tree. He bite. But he didn't bite me. A blue monkey in a tree. He bite. But he didn't bite me," thus creating in a sense his own predictable text.

Later in the evening Brad asked his mother to read the text with him. His mother read the first part of each page and as she came to the last line it was Brad's turn. His contribution at this point in time was, "But he didn't bite me!" Despite the fact that Brad's line differed from the author's line, Brad's mother at each of these points accepted Brad's contribution and proceeded to the next page and her part of the reading.

The last sequence in this book shows a brown owl in the tree which breaks the picture pattern of the book as all previous animals are either make believe or unlikely to be found in trees. This shift in pictures is also reflected in the graphics where the pattern now changes. Instead of:

"One pitch, black, very dark night,
Right after Mom turned out the light,
I looked out the window only to see,
A (adjective) (noun) up in my tree.
But that (adjective) (noun) didn't frighten me."

the form is now:

"One pitch, black, very dark night,
Right after Mom turned out the light,
I looked out the window only to see,

1.2 (Continued)

A big brown owl sitting in my tree.
And did that big brown owl ever frighten me!"

Because of these shifts, Brad elected not to read his line on the last page. Brad's mother, sensing his desire to have her proceed without his oral participation, read, "And did that big brown owl ever frighten me!!"

All was quiet for a moment while Brad puzzled over the book switching attention from the owl to the boy in the bed, who on this page is sitting up with mouth agape, eyes wide, and hair standing.

Brad immediately wanted the book reread. This time, as they jointly read the text with Brad's mother reading the first portion of each page and Brad reading his line, he said, "But that (adjective) (noun) didn't scare me!" Never here nor in any subsequent interactions with this book did he ever mention the concept of "bite" again!

This is an important language story as it documents early evidence of sign utilization as well as the cultural and social nature of literacy learning. While Brad clearly created his own viable text from the graphic display available, as a result of social interaction his new text moves closer to what might be called social convention in reading. What Brad learned in interaction with this book and his mother, who in one sense was acting as a representative of her culture, was what constituted the signs in this book and what one was to make of them.

It is interesting in this regard to note that the original authors of the text might well have selected the same signs which Brad selected and built their book around the concept of "bite" rather than

1.2 (Continued)

"frighten." When one looks at all of the animal pictures in the book and notes that well over half have their teeth showing, one soon realizes that Brad's initial prediction was far from random. In fact, one might argue that the original authors were not that proficient in their use of signs or they would have eliminated this particular sign potential which ends up being an available point of confusion.

One of the concerns, of course, with the concept of text as an open system (Eco, 1979) is that it might initially appear that any meaning and everyone's meaning is of equal worth (Fish, 1980). When viewed in cultural and social context, however, this concern turns out not to be real. As Brad and his mother demonstrated, it is through our interactions with other members of our culture that signs are established and meanings agreed upon. Given this process, it should not surprise us to find that the texts most persons create in a given culture share much in common. By the same token, we should be equally surprised if text agreement were 100% as it is unlikely that each of us brings the same background of experience relative to either the utilization of, the familiarity with, or the knowledge of signs.

Convention, from this perspective, is a social phenomenon, and as such represents some agreement among members of a cultural group as to what are to act as signs and what they are to mean. When the classroom is viewed as a miniature culture, it is relatively easy to hypothesize that what class discussions on books, worksheets, and writing projects do by way of literacy instruction is, for better or worse, instruct the

1.2 (Continued)

language user in the process of sign use and interpretation. This is true even when the signs being taught or focused on are not particularly useful ones from a learning perspective.

Models of literacy instruction need to be able to explain both good and poor literacy instruction. Language instruction and natural language use need not, and often are not, one and the same. Clearly, then, while this conceptualizing alone may be helpful in our thinking about literacy and literacy instruction, it simultaneously accents why it is even more important than ever that teachers understand reading and writing if they are not to do violation to these processes by either teaching aberrant signs or by posing certain signs as more powerful, helpful, or finite than they, in fact, are. A sign perspective on literacy learning offers the hope of helping us understand both functional and dysfunctional instances of literacy learning.

We ought to think of print settings as a complex sign in which cue systems transact and where theoretically not all options are even possible given a particular literacy context. While it may be practically necessary to use the terminology of cue systems in discussing literacy data because of the complexity of the event and to establish some reference points to the past, clearly given our experience, it is equally important that we view the junction of alternate cue systems as forming a single gestalt which signs meaning. Equally important is the fact that while this concept may seem elusive to us, given the ways in which we've thought about literacy up until this point, it seemingly is not to children as young as 3, 4, 5, and 6-year olds.

1.3 READING AND WRITING AS CONTEXT SPECIFIC LITERACY EVENTS

There has been a tendency in the past to treat reading and writing as complex, but nevertheless single, rather monolithic skills. Once the skill of reading was mastered, any material encountered could be read. Once the skill of writing was mastered, any text could be written.

An examination of instruction readily shows that these assumptions were and are made. In reading, for example, the basic model in use treats children as if they are on an assembly line with certain subskills (parts) added at each grade (station). The assembly line continues year by year until what exists is a final product: namely, a totally proficient reader, supposedly able to read anything he or she encounters. Further support for this argument can be garnered from the fact that most beginning reading materials are of story narrative variety (often of questionable quality) with little concern shown for inclusion of other types of readings in basal programs. If other types of readings are included they, too, often follow the narrative form. If reading is made up of skills which once mastered are always mastered, then one need not be as concerned about what is read, as that something is read and the specific skill mastered. The fact that skill mastery across contexts doesn't always work is often addressed to a problem of "learning transfer," rather than as a problem of the underlying theory of literacy.

The same case can be made for writing. There has been more concern, for example, for the teaching of grammar *per se*, than with the ability to use an appropriate grammar in a particular context. The

1.3 (Continued)

assumption is that once one knows the grammar of sentences in isolation, one knows the grammar of stories, of personal letters, of essays, of texts generally and that one can now write anything one wishes to write.

While we wish to maintain that a single language process undergirds reading and writing, we also wish to argue that both reading and writing are context specific literacy events. This issue as such abuts the issue of cue system utilization. In our view cue systems are not independent systems that may vary along the same hypothetical range for each and every literacy event; rather, a relationship exists between particular literacy events and the range of options available. Even such things as topic choice and vocabulary must be viewed in light of the literacy event in which they are embedded. One can neither theoretically nor practically talk about or write about just anything, given a particular setting. Vocabulary, often treated as an access point to both reading and writing, is rather a "fringe benefit" of having had opportunity to engage in a contextually situated literacy event.

These points are readily demonstrated when one analyzes the responses we received to our environmental print task and compares them to that collected on other tasks. We began our study of 3, 4, 5, and 6 year old children, not surprisingly, with a fairly traditional view of cue systems and our own biases as to which cue systems played key roles in terms of literacy access and control. What we have learned in the process as it necessitated reformulations of perspectives which in the past have seemingly served us and others well.

1.3 (Continued)

One of the things we rather painfully discovered is that before we could semantically code the responses to our environmental print task, we had to pragmatically determine whether or not the child had engaged in the reading contract we set before him. We found that children, like us, have options available to them when asked a question. They can answer it, say they don't know, negotiate the contract so that they answer some other question, or insinuate that the question was inappropriate and so refuse to consider it. Depending on which choice they make, semantic and syntactic options are immediately limited. If children wish to engage in our reading contract, that is, answer our question of "What do you think this says?" when shown a Kroger's milk carton, they must say, "It says 'Kroger', 'Milk', 'Kroger's'" or something very much to this effect. If they decide to negotiate the contract they must say, "Some milk goes in there," thus answering the hypothetical question, "What goes in there?", or use lexicogrammatical structures appropriate to whatever hypothetical question they are posing.

If one studies those responses which are truly reading responses, what one finds is very interesting. Suddenly all responses semantically look like things one could find in environmental print. In fact we discovered by developing a semantic feature taxonomy of environmental print found in the world around us and a similar taxonomy for coding the semantic features of children's responses to environmental print, that nearly 97% of the children's responses were codable within the framework that adults use to semantically organize environmental print in

1.3 (Continued)

this society. Now that is far from random. Essentially what these data mean is that children, at a very early age, from on-going encounters with environmental print in this culture, come to understand the range of semantic options available.

Equally interesting is the fact that syntactically their reading responses look quite different from their talking about the environmental print item responses. That is, if you compare just the syntactic organization of their responses to the question "What do you think this says?" as opposed to the syntactic organization of their responses to the question, "Tell me some of the things about this," it is readily apparent that their responses to the first question are written language syntactic responses. Now that, too, is impressive as it clearly demonstrates the young child's sensitivity to print even if the response given is not the conventional or expected response.

Further, when one looks across the pragmatic, the semantic, and the syntactic characteristics of the responses to environmental print what one finds is an orchestrated decision. Once the decision to engage in the reading contract is made, semantic and syntactic options, otherwise available, are no longer possible. Said another way, to make a pragmatic decision is to have simultaneously made a semantic and syntactic one.

If one compares children's responses to environmental print with the responses to our letter writing, story writing, story reading, or uninterrupted writing and drawing tasks, this point becomes even

1.3 (Continued)

1.3 Figure 1. Same Child Responses to Reading and Speaking Tasks within the Environmental Print Task (3-year olds).

Reading Task Responses (Question: What do you think this says?)	Speaking Task Responses (Question: Tell me some of the things you know about this.)
Band-Aid	A band-aid that you put it on when you bleeding. You got to put it on and wear it and you gotta go home.
Band-Aid	If you want band-aids on, your Mommy will give you a band-aid.
Rubber Band	You put some on your sores. Right here (pointing to leg).
Band-Aid	For my arm. I hurt my arm.
Band-Aid	A band-aid to go over your finger or toe.
Band-Aid	I don't know no more.
Stick on the sore.	You stick it on a sore.

clearer. In letter writing, "I love you's" abound, yet this is never a response one finds in the environmental print task. Environmental print reading responses function like environmental print functions, sound like what one would find on environmental print, and have the semantic feel of environmental print even when the unexpected response is given. By similar token, the child's letters written to a grandmother, mother or friend sound like personal letters one might write,

1.3 (Continued)

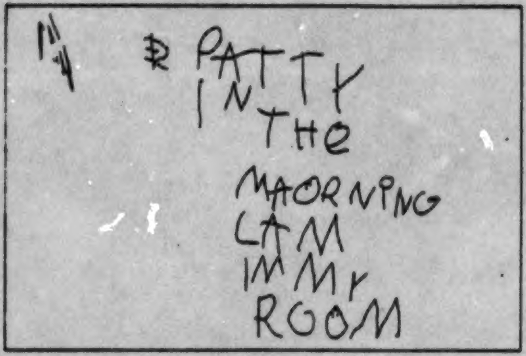
function like personal letters function, and have the semantic feel of a friendly letter. These observations are true across all children no matter how young the subject is we are talking about.

One has to be impressed with this sort of sophisticated and highly sensitive response to print in alternate contexts. Seemingly children not only intuitively understand the orchestrated signing of cue systems, but operate schematically from such a base in literacy events. It is important both theoretically and practically, however, to understand that individual decisions per cue systems are seemingly not made, but rather that print in various contexts has its own unique pragmatic, semantic, syntactic and symbolic configuration which creates a complex sign. There is in this sense a harmony between and among cue systems in given print contexts and it is this harmony which as a whole signs meaning and which as a whole is accessed in making a literate response.

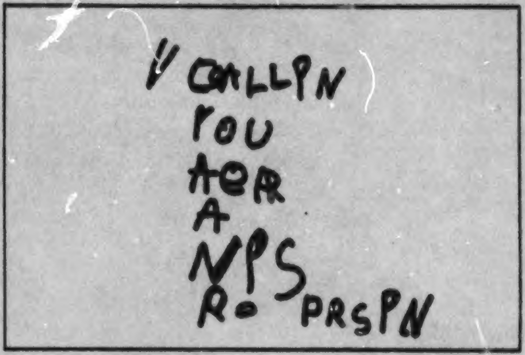
A series of examples should help to clarify these points. The following writing samples were collected from Robin, a 6-year old about to enter the first grade. Figure 2 contains notes which Robin left for Patty and Carolyn, two significant adults who live in her home. While one might say that the messages function differently (one a directive; the other a statement of fact), it's important to understand that both writings function as notes. Semantically the messages fall within the confines of topics for which we as adults use notes. Structurally the semantic units are organized much as an adult might organize a note with an addressee, a message, and a signature, the latter category is

1.3 (Continued)

1.3 Figure 2. Notes (Robin, Age 6)



R PATTY
IN
THE
MAORNING
CAM
IMMY
ROOM



CALLIN
YOU
AER
A
NIS
RO PRSPN

Context of Situation

Field: Home; Need to talk over personal problem; Unprompted.
Mode: Uninterrupted written language.
Tenor: Child to mother.

Transcription

Patty
in the
morning
come
in my
room

Context of Situation

Field: Home; Favor had been done; Unprompted.
Mode: Uninterrupted written language.
Tenor: Child to important adult.

Transcription

Carolyn
You
are
a
nice
person
Ro (beginning of signature)

Research Notes

Ethnographic Application Study.
Data collected by Patty Wells under direction of senior authors.
These and other samples collected in same week.

1.3 (Continued)

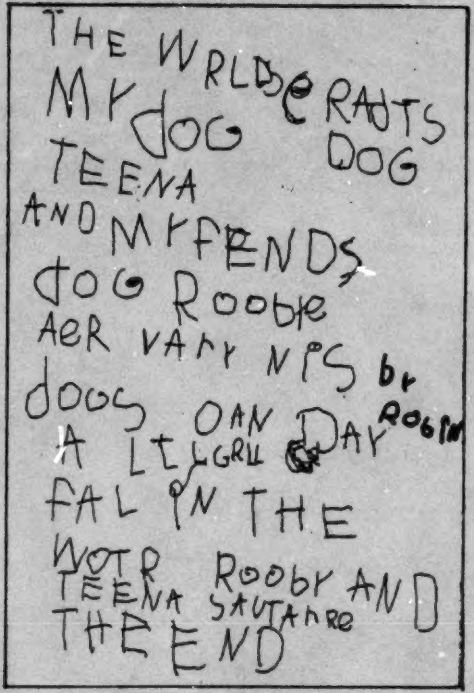
absent in Robin's notes just as they are in some of the ones left for us but given the context, it is self-evident who they are from. Syntactically they are organized like written language. One can fairly safely assume that if these requests were oral they would be syntactically different--"Come in my room" as opposed to "Patty: In the morning, come in my room"; "You're a nice person" rather than "Carolyn: You are a nice person." It is not accidental, we believe, that the graphic display looks like a note with words strung down the page in a column-like fashion, nor is the fact that she selected 4x6 cards as the paper on which to write her notes.

Figure 3 is a story which Robin wrote. This activity, like her "notes," was self-initiated. Her story is entitled THE WRLDS GRADTS DOG (The World's Greatest Dog) and reads, "My dog Tina and my friend's dog Ruby are very nice dogs. One day a little girl fell in the water. Ruby and Tina saved her. The end."

This piece of writing, in contrast to her notes, is more distinctive. Not only is the topic choice appropriate to a story, but so too are the title, the predictable conclusion of "The end," and the semantic story structure (a setting in which the protagonists and the time frame "One day" are introduced, as well as an initiating event, a consequence, and an internal response which doubles also as a part of the setting in this instance). Pragmatically this writing functions as a story, semantically it tracks like a story, syntactically it sounds like a story, and graphically it is formulated like a story (this

1.3 (Continued)

1.3 Figure 3. Story (Robin, Age 6)



THE WRLDS GRAOTS
MY DOG DOG
TEENA
AND MY FENDS,
DOG ROObIe
AeR VARY NIS by
DOGS OAN DAY ROBIN
A LTLGRL
FAL IN THE
WOTR ROObY AND
TEENA SAVTAHRe
THE END

Context of Situation

Field: Home; Unprompted; Peer-aged friends decided to write stories.
Mode: Oral conversation between friends during writing of stories.
Tenor: Children writing stories to share with each other.

Transcription

The World's Greatest Dog
My dog
Tina
and my friends
dog, Ruby
are very nice
dogs. One day
a little girl
fell in the
water. Ruby and
Tina saved her.
The end.

1.3 (Continued)

latter point is more apparent when the graphic displays in Figure 2 and 3 are compared).

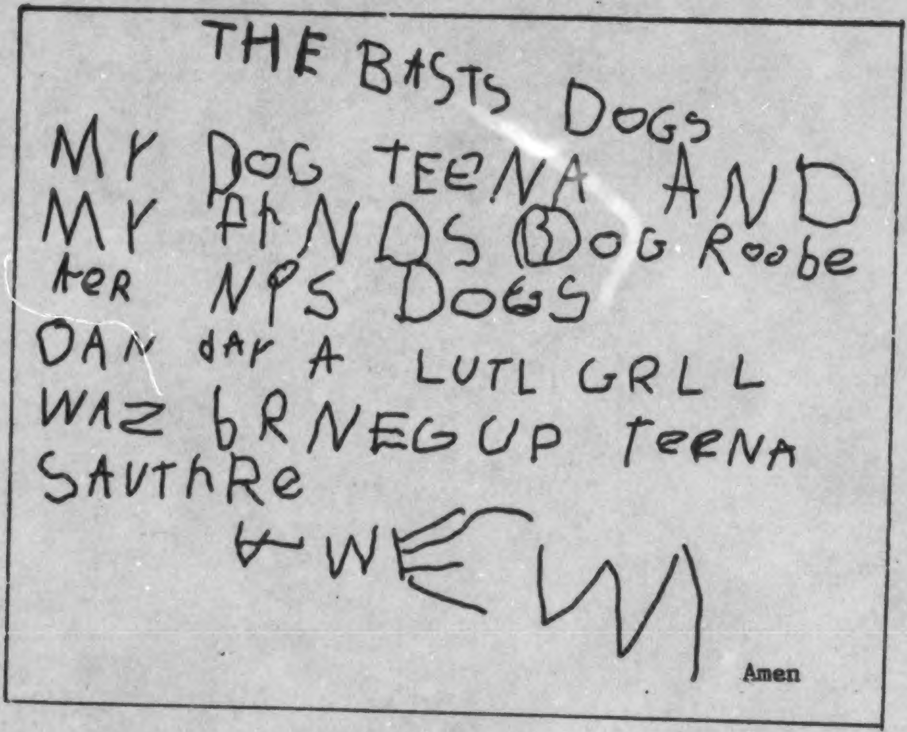
Robin revised her story, an activity she elected to do on her own. She entitled her revised story, "The Best Dogs," dropping her more hyperbolic title, "The World's Greatest Dog." Although she retained the first line intact, she elected to revise her remaining lines, changing her euphemistic "a little girl fell in the water" to "A little girl was drowning." Interestingly, in this version, her own dog, Tina, was given sole credit for having saved the little girl, a change, incidentally, which alters the cohesiveness of the piece. It's important to note that even with these changes the "story gestalt" of her graphic display is not altered. (Fig. 4)

The last sample we will examine is a letter written to her father. This effort came as a result of her father having written asking why he hadn't heard from Robin and wishing that he did. Robin's letter to her father reads, "Dear Dad, I love you. Is the cat okay? The puppies already have their eyes open. Tina had 7 puppies. Grandma's puppies are 1 month old. Willy said 'Hi.' My mom painted my room. We got an apple tree. Ooops, it's a pear tree. Maria said, 'Hi.' I went to Gulliver and The Great Muppet Caper. Love, Robin." (Fig. 5)

As is characteristic of friendly letters, topic shifts, ritualistic greetings, and brief news reports on what is happening abound. The tone is informal reflecting the relationship she has with her father and is further established through her handling of corrections

1.3 (Continued)

1.3 Figure 4. Story Revision (Robin, Age 6)



THE BASTS DOGS
MY DOG TEENA AND
MY FRNDS DOG Roobe
heR NIS DOGS
OAN day A LUTL GRLL
WAZ bRNEGUP TeeNA
SAVThRe

Amen

Context of Situation

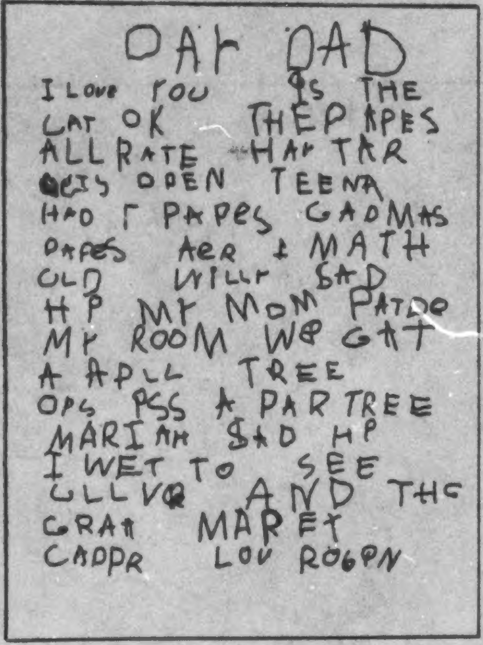
Field: Home; Unprompted.
Mode: Uninterrupted written language.
Tenor: Child for self.

Transcription

The Best Dogs
My dog Tina and
my friend's dog Ruby
are nice dogs.
One day a little girl
was drowning. Tina
saved her.

1.3 (Continued)

1.3 Figure 5. Personal Letter (Robin, Age 6)



DAY DAD
I LOVE YOU IS THE
CAT OK THE PAPES
ALL RATE HAY TAR
ECIS OPEN TEENA
HAD 7 PAPES GADMAS
DAPES AER 1 MATH
OLD WILLY SAD
HP MY MOM PATDO
MY ROOM WE GAT
A APLL TREE
OPS PSS A PAR TREE
MARIAH SAD HP
I WET TO SEE
GLLVR AND THE
GRAT MARET
CADPR LOV ROBPN

Context of Situation

Field: Home; Father away and has requested that Robin write; otherwise unprompted.
Mode: Stimulated by oral reading of written request.
Tenor: Child to father.

Transcription

Dear Dad
I love you. Is the
cat okay? The puppies
already have their
eyes open. Tina
had 7 puppies. Grandma's
puppies are 1 month
old. Willy said
Hi. My mom painted
my room. We got
an apple tree. Oops, it's a pear tree.
Marcia said Hi.
I went to see
Gulliver and The
Great Muppet
Caper. Love Robin.

1.3 (Continued)

in this piece of writing; namely, "Oops, it's a pear tree" rather than by erasing apple and inserting pear, or by producing a second edited version as she did with her story. Her letter sounds like a letter, looks like a letter, reads like a letter, and functions like a letter. To examine her choice of topics, semantic organization, syntax, self-correction strategies, and style as if each were a free, independent choice is to miss the orchestrated literacy event which this letter represents.

These writing samples were collected within the space of a single week! They demonstrated alternate literacies. Literacies which are context specific in terms of not only syntactic style, semantic structure, and pragmatic function, but also topic choice and vocabulary. Literacy is neither a single, monolithic skill nor a glorified state which one enters. In its specific detail literacy is an orchestrated decision embedded in and endemic to a particular context of situation. It is not an end state, but rather an event which one might judge as more or less successful given its intent. Robin demonstrates through these samples her ability to successfully use written language as a complex sign system for a variety of common societal and personal purposes. This does not mean she is universally literate, but it does mean that she is growing in her ability to successfully use written language in a variety of contexts. Her insights into written language and how it works are as important to her growth in reading as they are to her growth in writing.

1.3 (Continued)

Nor should Robin be considered a special case, though, of course, she is a unique one. What Robin's writing samples do illustrate is what written language growth and development look like under home conditions where preschool children are provided a rich opportunity to meaningfully engage in a wide variety of literacy events.

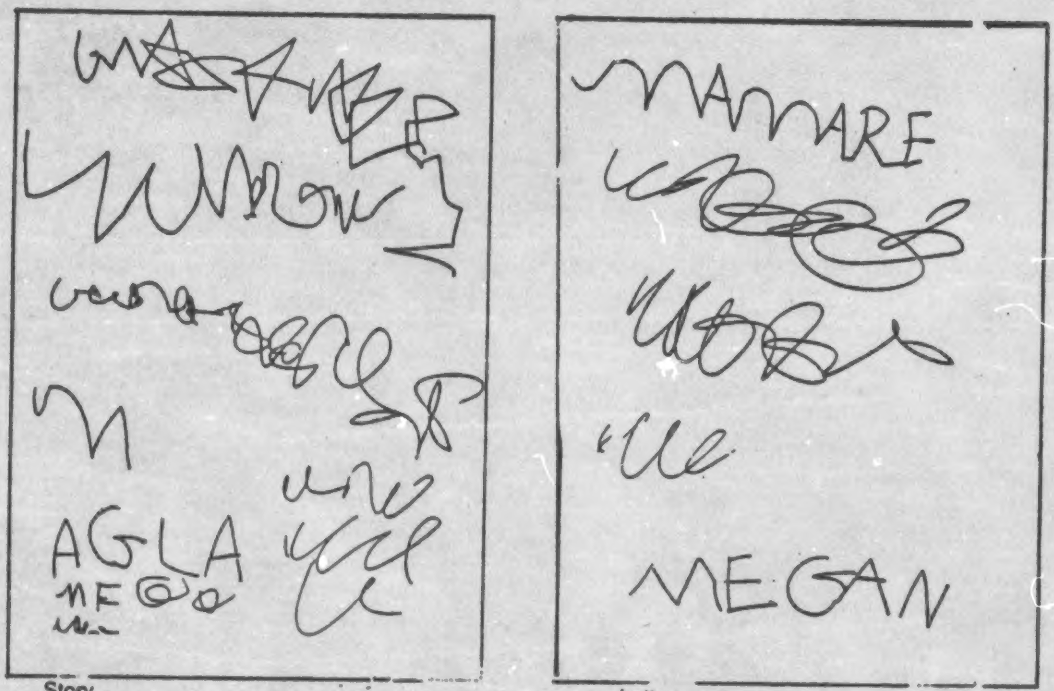
Long before the writing looks representational or the reading response conventional to our adult eyes, evidence of literacy learning as a contextually specific literacy event exists. Megan's story and letter is a case in point (see Figure 6). Here, though both appear non-representational to our conventional eyes, Megan's readings of her story and her letter demonstrate the pragmatic, semantic, syntactic, and symbolic contrasts, variations, and distances which she sees and posits between these forms of literacy.

Given the orchestrated decision required of any particular instance of literacy, it is imperative that children be allowed to encounter written language in its full complexity and variety. Decisions as to cue systems are not isomorphic but rather transactional. To the extent that these observations are true, Sesame Street, Electric Company, and many other early, formal, school literacy programs which break language up to isolate and focus attention on letter-sound relations do an injustice to language and how it works, and to children, their perception of the process, and what they must know to grow.

Nor is it the case that literacy as context specific is a phenomenon uniquely applicable to neophyte language learners. If you

1.3 (Continued)

1.3 Figure 6. Story and Personal Letter (Megan, Age 4)



Story

Letter

Context of Situation

Field: School; Uninterrupted Story Writing Session; Prompted.
Mode: Oral request; written response; oral reading.
Tenor: Child to teacher/researcher

Transcription (as read by child)

> "Once upon a time there was a ghost. Three ghosts family. One day they went out for a walk. They honked the horn cause they saw Mrs. Wood and said, 'I,' then they went back to Mrs. Corners and they honked the horn and sa-said 'Hi.' The end."

Context of Situation

Field: School; Uninterrupted Letter Writing Session; Prompted.
Mode: Oral request; written response oral reading.
Tenor: Child to teacher/researcher

Transcription (as read by child)

> "Once upon a time--there was--wait--uh, huh. Dear Mary, I would like you to bring me . . . here everyday. The end. Megan."

Research Notes

Longitudinal Study Data
Data collected by Mary Hill under direction of senior authors.
Both samples collected same day in back to back sessions.

1.3 (Continued)

ask adults to construct a cognitive map of what they think an article on "ice cream" might include, you often get a very general list of possible subtopics (see Figure 7, Sample A). If, however, you ask the same adult to draw a second map for the same article once you indicate that the specific article you were thinking about appeared in Time Magazine, you get a much more semantically attuned map (see Figure 7, Sample B). If, instead of Time Magazine, you use Consumer Research (the new title for Consumer Report), appropriate and quite predictable changes in maps occur (see Figure 7, Sample C) even when an intimate familiarity with this magazine was not prerequisite.

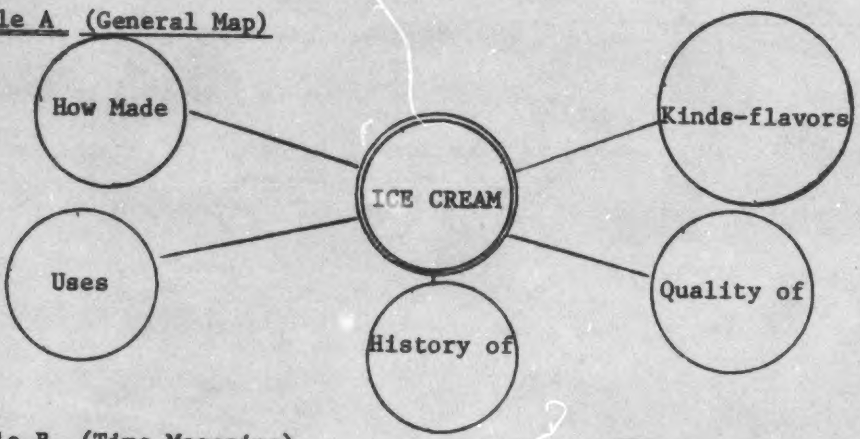
We have repeatedly used this activity in teacher inservice workshop sessions in an attempt to "defreeze" (Vygotsky, 1978) adult perceptions of literacy. Context is not an either/or variable. When we are deprived of context, we, like children, have no way to limit options. Naturally context is always present. Unnaturally, such as under some instructional conditions, we must impose a context and take a guess; but this makes instructional reading much more tricky, if not more difficult, than real reading. We might go so far as to predict, given this insight into literacy learning, that the further the child's home literacy learning culture is from the school's literacy learning culture, the more devastating the results and the more insidious the practice of decontextualizing print for instructional purposes.

Practically what this means is that language must be treated for instructional purposes as "whole," inclusive of its natural contextual

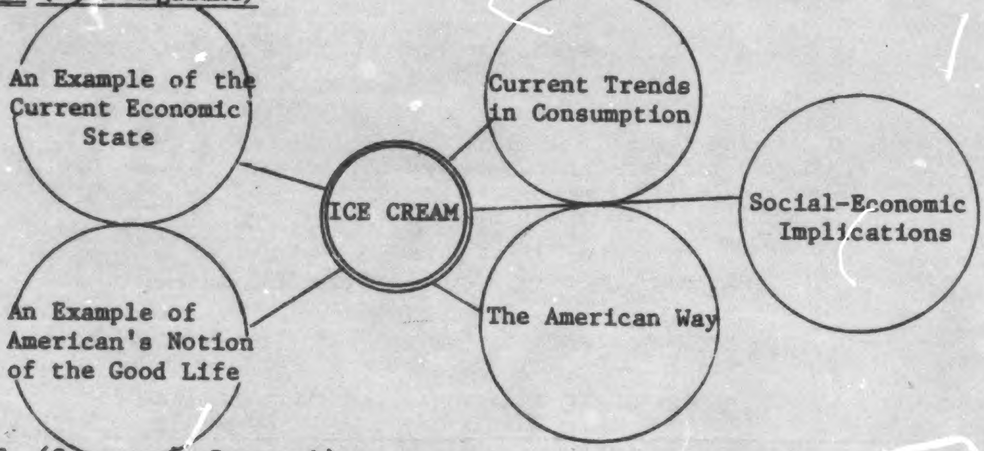
1.3 (Continued)

1.3 Figure 7. Cognitive Maps for Magazine Article (Adult Example)

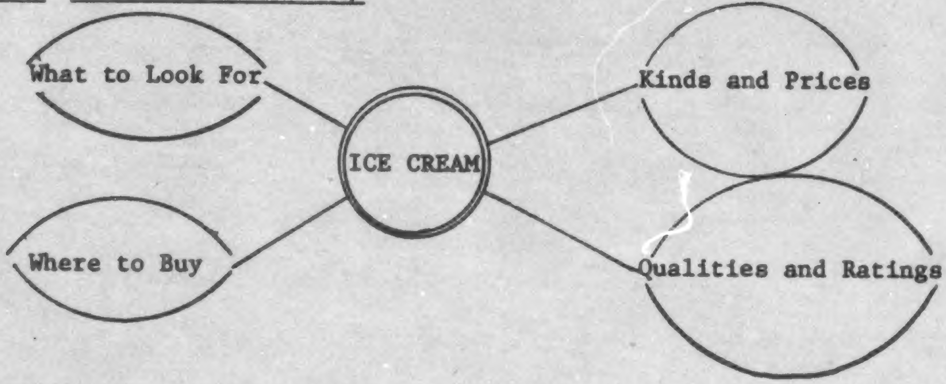
Sample A (General Map)


How Made
Kinds-flavors
ICE CREAM
Uses
Quality of
History of

Sample B (Time Magazine)


An Example of the Current Economic State
Current Trends in Consumption
ICE CREAM
Social-Economic Implications
An Example of American's Notion of the Good Life
The American Way

Sample C (Consumer's Research)


What to Look For
Kinds and Prices
ICE CREAM
Where to Buy
Qualities and Ratings

1.3 (Continued)

support. To isolate a bit of language (letters, words, grammatical form, etc.) is to abstract it. Under abstracted conditions a bit of language can mean anything. When language is presented in its natural context--in trade books, in newspapers, in personal letters, etc.--its meanings are clear and children can not only access but continue to build appropriate schema.

We learned early in this research program that if you give young children a sheet of paper and ask them to write a letter, several will respond by writing a single letter of the alphabet like a capital H on the paper. If, however, you give children an 8-1/2 x 11 sheet of paper plus an envelope and make the same request, such a response is unlikely. It is not only that text resides in context, but context signs text meaning.

A very practical implication of this insight seems to be that in order to teach language "skills" in the broadest sense of successful language use, the organizational framework for instruction must be contextual specific literary events; whole texts in whole contexts. One initial instructional context might be environmental print, a setting, given our data, which children in this culture obviously find predictable. Class composed books, with each child contributing a page after an environmental print walk about the school, would not only integrate reading and writing, but result in a book which everyone could soon, if not immediately, read. An environmental print school walk, a product book consisting of labels children bring in from home with the

1.3 (Continued)

children's own writing as to what these things mean to them, are other activities which build naturally around this context (Milz, 1980). Children might make books of their favorite commercials, write their own commercials for products, and even write a commercial for themselves using pictures they brought in to school. Clearly our data show that children by the age of 6 have lots of data concerning the relationship of print to oral language by the time they enter school.

To build curriculum experiences, as is now commonly done, assuming that children know little or nothing of written language, is to ignore what we currently know about young children and literacy learning. Young children at all ages, at home or in school programs, need the opportunity to engage in a wide variety of oral and written language experiences including environmental print activities, reading picture story books and predictable books, writing stories, and receiving, writing, and reading letters, to name a few. The recommendations suggested here build on what children know, provide open-ended activities where entry, use and growth have multiple possibilities, and where children and their achievements are both encouraged and recognized.

1.4 STAGES TO STRATEGIES: REDEFINING DEVELOPMENT

Explorations in literacy with 3, 4, 5, and 6-year old children are often referred to as "Research in Beginning Reading and Writing." This label is unfortunate for a number of reasons.

First, the label accents a level and as such suggests that research of this type is of particular worth to educators who work at that level; namely, Early Childhood Education. As a result, few secondary and even fewer college teachers of English have even a passing acquaintance with inquiry in this area.

Implicit also is the suggestion that what young children do in the name of reading and writing is some pseudo form of the real process. At best it's a beginning; a stage on the way to becoming literate; something to be outgrown as one moves on to the real stuff of literacy. While these stages are interesting in that they may help to explain later stages or misconceptions the child has about print, the assumption runs, they are a beginning, ephemeral, often cute, but not serious explanations of the process later on. If one really wants to understand literacy as it relates to school or the work place, one has to do research in these areas.

Even those who do research in the area often do so in an attempt to find strengths upon which and from which they can "build" literacy programs. While these intents may not seem so bad, they nonetheless are demeaning of the child's achievements and the overall significance of research in written language growth and development.

1.4 (Continued)

We were and are not totally immune to these assumptions ourselves, though we are now more convinced than ever that the term "beginning" must go if research in this area is to be understood and appreciated for what it is; namely, a look at real literacy in its unfrozen form.

It should not surprise the reader, then, to find out that we began our research looking for developmental trends by age. Because our data were videotaped we happened, by both default and design, upon process universals which were seemingly learned early. This essay will attempt to identify and describe some of these process universals. Their value lies in the fact that once they are learned, they do not go away, but rather characterize the reading and writing of adults as well as children. They are in this sense not developmental stages, but strategies characterizing success in literacy and literacy learning.

Some of these strategies we have identified in an earlier paper (see Section 5.1). What we wish to do here is revise them with the intent of further clarifying and expanding them in terms of their importance to our understanding of literacy and literacy learning. In many ways they are basic tenets undergirding a text ownership theory of literacy and literacy learning which is currently being developed by the authors.

1.4.1 TEXTUAL INTENT

This strategy, too simply defined by us and others as semantic intent, involves the expectation that written language will be personally meaningful. By the age of 3 children have already developed such an expectation.

Semantic intent characterizes the responses which not only 3-year olds make, but the responses which we and other successful written language users make. The only group for which this is typically not true is remedial readers. These children often sound out words and in so doing produce non-words. As we found no 3-year old who did not approach print as if it were going to be meaningful, we must conclude that expecting print not to make sense is a taught behavior. Somewhere between the age of 3 and becoming a remedial reader, children learn to abandon the expectation that print will make sense. Once they have abandoned this expectation, it must be reestablished if growth is to occur. This observation is, in our estimation, the most devastating thing we can say about reading and writing instructional practices which focus on, isolate, and draw attention to systems other than meaning in language.

In this era of back to the basics these observations are meant to remind us that there is nothing more basic than meaning in language. It is, in fact, the expectation of that meaning which shapes not only a literate response, but growth.

We indicated earlier that we feel semantic intent has been discussed in terms which are too simple. We now wish to expand upon that notion by using the term textual intent. Textual intent entails

1.4.1 (Continued)

not only an expectation that written language makes sense, but also includes a "shape" of what that sense is to be like. Graphic displays reside in context. From on-going encounters with such displays, the schemas we develop include not only an expectation for meaning and function, but an expectation for the kind of print, the style of print, the semantic and syntactic structure of print, the lexical form of print--in short, and for lack of a better term, the shape of print that is to be there. It's not that context comes first and then meaning occurs. It is that without the identification of context there is no meaning; with meaning there is a perception of context.

The examples in Figure 1 illustrate this point. In these instances the children have verbalized their thinking, thus giving us rare glimpses into the process. What makes these examples so important is that even when the response given is an unexpected one, the processes involved in arriving at that decision are the same. Textual intent, then, is an expectation that this graphic display in this context has a unique shape, of which meaning is a central part.

Children's responses in story dictation as opposed to reading a piece of environmental print (Figure 2) have a uniquely textual shape to them. If one takes the responses which a 3-year old makes to environmental print and compares these to the responses made while dictating a story (responses which are a far cry from our existing notions of storiness), one has little difficulty deciding which set was generated in story dictation, although all are meaningful and can be characterized as having semantic intent.

1.4.1 (Continued)

1.4.1 Figure 1. Selected Environmental Print Responses: Text and Context as Orchestrated Sign

Print Setting	Response
Band-Aid	Tape. Let's see. Nope, not tape. What are those things called? Band-Aids.
For Sale Bill Morrow	I don't know. I haven't seen it anywhere. It looks like it's on the beach. Wait! For-Fur-For Sale Boat.
Toss Across[2]	I don't know. Oh, Toy Shop. No. That says Toys. Game. Toss Across Game.
Evel Knieval Chopper	What is that anyway? Evel Knievel Cereal?
Kroger Cottage Cheese[3]	It looks like the alphabet, except it doesn't start with A.

Subscripts refer to condition under which data was collected within Environmental Print Task, i.e., Subscript 2 means Stage 2; Subscript 3 means Stage 3; no subscript means Stage 1. See Section 3.1 of this report for description of Task and Stages.

1.4.1 (Continued)

1.4.1 Figure 2. Same Child Responses to Environmental Print and Language Experience Story Tasks: The Shape of Things to Come (3-year olds).

Environmental Print Responses	Language Experience Story Responses
Don't know Eggs Ronald McDonald Coke Toothpaste Burger Chef	That tree. I'm going to fall down. Block. Boy. That a boy. Block. Tree.
A thing A cup Eggs A cup Toothbrush A Burger King cup	A spoon. A spoon to eat. There's a string. You put it round your neck like this.
Don't know Eggs McDonalds Coke Toothpaste Burger Chef	This is a box. A car. A candle. A string.

At each succeeding age level we studied, textual intent becomes more apparent. Four-year old responses are easier to identify as to contextual condition than are 3-year old response sets. Five-year old response sets are easier to identify than are 4-year old response sets, and so on. Despite this, the fact remains that no matter how "primitive" the response may appear, it already contains the shape of responses to come.

Who, after all, is to say that the identification of objects in a picture story book is not a "story grammar" given the way many adults

1.4.1 (Continued)

interact with children when they begin sharing books with them. The naming and identification of objects in pictures is often an early form of book reading, a "reading" probably negotiated through interactions between the child and the adult during the language event itself.

Object identification may, in fact, even be textual in another sense. One of the things which we have noted, in our observation of writers in this study and others, is that one of their first acts is often that of inventorying what is known or that about which one might write. We, in fact, have also found this to be so from our own introspective analysis of our own preparations for this report. Once such inventorying has occurred some selection of what to write about is made, but this initial inventorying sets up its own heuristic whereby the writer contrasts ideas and sets the wheels of invention in motion. This is a central process in writing without which one has no heuristic procedure whereby the process is propelled.

From this perspective, the 3-year olds' one word responses to a picture book may prove not only to be an initial form of text production, but may give insight into key processes involved in writing. This insight may explain why when topics are assigned to writers, inventorying is destroyed and with it the heuristic procedures which lead to generative invention, the impetus behind successful writing.

Given these insights, we name the strategy "textual intent," which for us captures not only meaning, but the shape of responses in relation

1.4.1 (Continued)

to context. As such we see this strategy as a basic process strategy which undergirds both reading and writing; one which governs not only one's approach to reading and writing, but rereading and revision. It is not outgrown, but rather a fine-tuning, and may be key to understanding why some graphic displays as well as some readers and writers are less successful written language users than others.

The importance of textual intent in terms of understanding "beginning reading" should not be ignored. Some researchers logically envision beginning reading as differing from proficient reading in that in the former there is more of a reliance on graphic cues. In proficient reading a more balanced use of semantic, syntactic, and graphemic cues is posited. This shift is hypothesized as possible given not only mastery, but automaticity, in the processing of graphemic information.

Socio-psychologically the notion of textual intent refutes such models. It suggests that it's at the level of text that decisions are made within which potential cue complexes are both predictable and perceptible.

One need not observe the writing of children very intently to notice that their Do Not Disturb signs (DO NUT DISTRUV, Alison, age 6) are written boldly, their asides (UNLES YU HAVTO, Alison, Age 6) softly, and their invitation to play (WOLCOM [Welcome], Alison, Age 6) in full floral color. Format, or graphemic information at any level above letters and words, in both reading and writing, is a textual matter, not a "doesn't matter" of text.

1.4.1 (Continued)

We're not saying that texts exist in the real world; rather, graphic displays do. Texts are an in-head phenomena. It is our choice to decide if 'Unsafe Bridge' and 'Jesus Saves' will be seen as two texts or a single text. Nonetheless, by seeing these two road signs as a single text--and they do exist side by side as one approaches a bridge on a road which has no turn offs in Alabama--one's interpretive strategy changes.

Given a literate society, the world is almost a continuous graphic display; a continuous, undifferentiated parade of print. If we see this continuous field of print as "here a text, there a text, and over there another," it's because cognitively we've made these decisions. Choice is an inherent notion of text.

Textual intent is a cognitive operation which has choice and a search for unity as its base. Imposing some sort of unity to components of the on-going display is an interpretive strategy which is learned socially. Context as a sign--and format as we discussed above is but a small part of context--helps us divide print in the world into texts. It is important to see this making sense operation as both textual and intertextual.

Intertextuality is a strategy which assumes that the textual demarcations that we have made and the interpretive procedures we have employed in the past are useful as anticipatory frames for sense making in the here and now instance. The strategic use of textual intent by language users permits interpretive strategies as well as provides

1.4.1 (Continued)

a frame for both entry and stopping in reading and writing. That textual entry and exit for both readers and writers is often difficult seems predictable given the relationship between text and graphic display discussed here. Its predictability, however, highlights the importance of understanding this strategy and its relationship to literacy learning at all ages. Textual intent, then, is a complex strategy which merits further elaboration and exploration by the profession. Negotiation, a strategy which we discuss next, is another vehicle which language users use in their search to find text or demarcate sense.

1.4.2 NEGOTIABILITY

A second strategy which we have identified is a strategy which is apparently learned early. Like textual intent it is not an outgrown, but rather appears to be a salient strategy used by successful readers and writers of all ages. Negotiation involves pragmatic and semantic shifts and moves made by language users in the selection, interpretation, and transmission of text.

To understand the strategy of negotiability one has to understand that language is an event rather than an act. Writers assume readers; speakers assume listeners. Language is, in this sense, a form of social action. It occurs between individuals over time and involves transaction.

One of the things that characterizes this event is movement between participants. One cannot understand a language event by looking at the language acts of only one participant. A language event is defined by the transactions which occur within it.

An example from our research should help to clarify. If one studied the question we asked subjects in our environmental print task; namely, "What do you think this says?" one might define the contract as being a request to read. If, however, one looks at the response, "It's got some sugar in it," one soon realizes that rather than read, the responder has negotiated the contract to be a "I'll-tell-you-what-I-know-about-this" contract. The researcher could reply, "No, tell me what this says," attempting not to permit such negotiation of topic. More likely the child's negotiated contract will be accepted, as such

1.4.2 (Continued)

moves are respected options which all language users have available to them. If the new contract is accepted and no attempt is made to establish the original topic, the contract on the floor is not a "Reading" contract, but a "Tell-me-what-you-know-about-this" contract.

This shifting of topic is a form of negotiation. To understand the meaning of a language event, one must understand and track such moves between and among participants.

What negotiation means, then, is that there is no one-to-one correspondence between the meaning of speech acts and the meaning of the communicative event. To understand an author's purpose is not to understand a reader's response, though they could share much in common. To understand a researcher's question is not to understand a child's response. To understand the intent of a research task is not to understand the results. From a research perspective, the concept of negotiation not only helps one understand and follow what is happening during a language event, but also allows one to identify what is and is not a reading or writing response from among all of the responses one received to what supposedly was a reading, or as the case may be, a writing task.

The concept of negotiation has other important uses in our understanding of written language use and learning. Because it represents the give-and-take of language; the fact that language meaning is created in use over time, it is the basic strategy which propels conversation. Because the setting under which we collected our reading and writing data included not only a child and a task but a researcher,

1.4.2 (Continued)

conversations are an integral part of the data. These conversations during reading and writing, stimulated in part by the researcher's presence, greatly assist one in the semantic tracking of the writing event. The reader is referred to article 5.9 for an in-depth look at such a tracking as well as for insights into the role speech plays during the writing event.

Negotiation is, in another sense, a process barometer of the constraints that are operative in a given context of situation. Through negotiation language users decide what of all they know will be said, what can be assumed, how to say what they have decided to say, as well as in what mode they will say it. As constraints change within and across contexts of situation, so does the discourse.

Part of this change during discourse production is a change in the stance taken by the participants involved in the event. A conversation can begin very informally and rapidly move to one of formality. From on-going oral and written language encounters children come to read these negotiations, and to decide on their meaning for the participants involved in the event. While reader and writer stance may seem like a topic which ought to be addressed in a high school English class, the fact that young children's oral language responses to an oral language question (Tell me some of the things you know about this) differ from the responses to a written language question (Tell me what you think this says) is *prima facie* evidence of their sensitivity to and understanding of not only negotiation but also their reading of print settings.

1.4.2 (Continued)

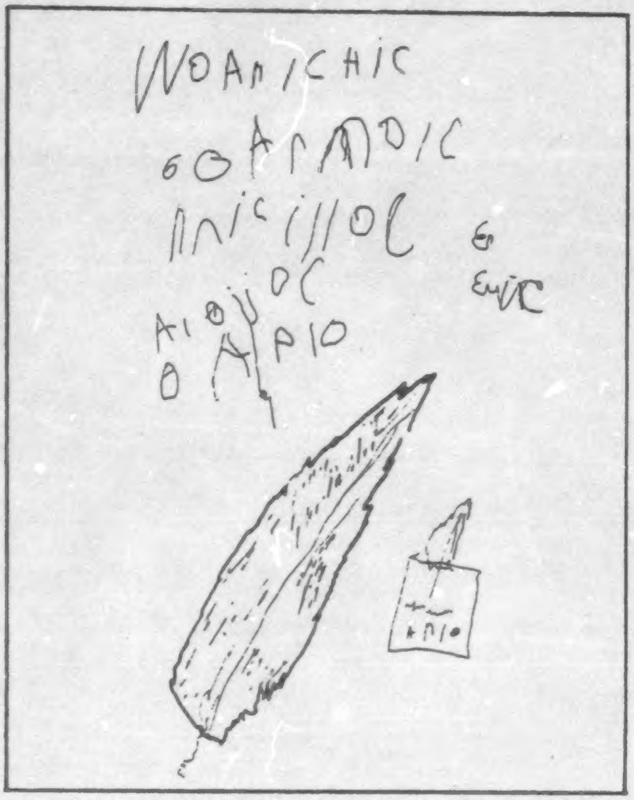
Further evidence of the child's sensitivity to and awareness of negotiation is evidenced in the various voices children use in their written efforts. In story dictation, for example, some children dictated their story in the first person present (I'm going to buy a paint brush), others in third person (Little Bird wanted to build a house), and still others used the imperative (Put the key in here). Some children even changed voices midstory so that portions were being "told" while other portions were being "lived." Taken together these kinds of negotiations may well underlie children's handling of and discovery of not only voice but dialogue carriers. One child even went so far in his experimentation as to draw a quill pen and declare that his "feather pen" was writing the story, a notion he beautifully captured in the drawing that accompanied his text (Figure 1).

What makes these examples so important is that they illustrate the significance of negotiation as a strategy in language growth. As can be seen, negotiation takes on a variety of forms which transcend not only oral and written language but which have successful communication as a common motivation. At this level, in a slightly different form, negotiation also involves moves across communication systems.

In an attempt to communicate, writers use not only words but pictures, charts, graphs and other forms of communication. Speakers use gestures, stress, pitch, intonation, and depending on the setting, charts, graphs, pictures, drama, dance, music, as well as direct reference to available objects in their environment. Part of what any language

1.4.2 (Continued)

1.4.2 Figure 1. Story (Eric, Age 5)



Context of Situation

Field: Home; Friend coming over to have child write; Prompted after discussion of his pet snake.
Mode: Oral request; Drew picture with pen then changed to pencil, "So I can erase"; Wrote text; Read text.
Tenor: Child to adult friend who was perceived as a teacher.

Transcription (as read by the child)

The feather is writing the story. It is writing about snakes: bull snake, and garter snake and boa snake. Eric.

Research Notes

Ethnographic Application Study.
Data collected by Martha Manny under direction of senior authors.

1.4.2 (Continued)

event involves is negotiation, then, of not only what context is to be assumed and what stated, but also the form in which what is known will be communicated.

Young children, very early on, come to understand this give and take which characterizes language events. Their use of negotiation gives them not only a keep-going strategy, but allows them to cope with difficult language situations by moving such situations to a level which makes sense.

One of the popular ways children use negotiation in writing is by moving to art as an alternate communication system. Once they have exhausted what they know about something and or how to say it in language, they very readily and easily slip into art as a means of placeholding and communicating their meanings. This shift among and between communication systems is very natural and as such affords them an organizational strategy when done first and a keep-going strategy when done mid-stream.

In some ways their use of this strategy makes them appear to be more proficient than older more mature writers who write, stop, write, stop and in halting fashion produce a graphic display. By freely moving between communication systems, young children can attend to message and the orchestration of meaning. By contrast many 6-year olds, having been introduced to formal language instruction, and who now have been taught that writing means print and not pictures, looked more inhibited as writers. What they could mean depended on what they thought they knew how to write in an acceptable form.

1.4.2 (Continued)

We found, for example, that 3 and 4-year old children freely move between art, drama, and writing in attempting to honor a writing contract. Kindergarten children, involved in an intensive learn-the-alphabet program at the time of our research, all chose to negotiate this contract to be one of drawing. What their letter-name-writing instruction on school paper had taught them was that they didn't know how to write. Under these conditions, they all moved to art in an attempt to avoid writing. In some ways such moves can be viewed positively as strategic moves to establish a tolerable communication contract. In other ways it must be viewed negatively as it can be considered as an avoidance strategy.

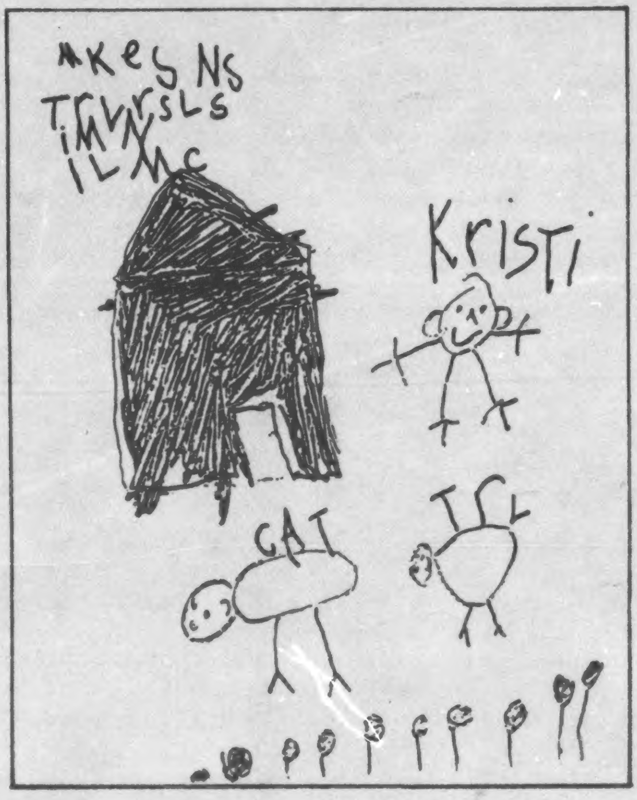
This is an unfortunate effect, no doubt the result of the arbitrary lines drawn between language, art, and the other communication systems in schools. It is, nonetheless, of theoretical interest to note that the direct instructional strategy of teaching letter names, done, one supposes, in an effort to help children access written language, functions practically, in this instance, to drive children away from engagement in that process. Since most successful writers obviously employ this strategy, given the number of charts and pictures in most written materials, it is rather unfortunate that beginning formal written language instruction fails to build on this strength, and to encourage its early and continued development.

A vivid example of the importance of negotiability to our own understanding of written langauge growth and development is the piece

1.4.2 (Continued)

we collected from Kristi, age 5. Kristi began by drawing a picture of her house, herself, and her pets. Her graphics read: "My cat is nice. Turtles are slow. I am nice. I like my cat."

1.4.2 Figure 2. Story (Kristi, Age 5)



Context of Situation

Field: Home; Uninterrupted Story Writing; Prompted.
Mode: Oral request; Drew pictures; Wrote text; Oral reading.
Tenor: Child writing story for mother.

Transcription (as read by child)

(Oral Aside) "This is a story about me and my pets."

MKESNS	My cat is nice
TRLSLS	Turtles are slow.
IMN	I am nice.
ILMC	I like my cat.

Research Notes

Ethnographic Application Study.
Data collected by Mary Fossier under the direction of the authors.

1.4.2 (Continued)

While alone these lines appear to be random statements with little cohesion, when viewed in the context of her art they are readily perceived as a cohesive text. Without an understanding of the strategy of negotiability it would be easy to declare that Kristi does not have much of a sense of text. Viewed with an understanding of negotiability and its role in language use, such a decision would be erroneous as together Kristi's pictures and print form a surprisingly cohesive text.

Observations of this sort lead us to conclude that writing is in a very real sense a multi-media event. If we are to understand the writing event we must come to understand that negotiation into drama, art, and other communication systems is an integral part of the process. Without these insights it is easy to declare the product to be "non-text," underestimate both the child's achievement and development, and even decide one needs alternate process models for adults and children when, in both form and kind, the processes underlying the written event are the same.

As these examples illustrate, the concept of negotiation may well aid understanding of key processes involved in discourse production and comprehension across age groups and across aspects of proficiency. Pragmatically, negotiation as a strategy involves the give and take of oral and written contracts which lead to a reader's and a writer's sense of audience and distance; concepts which are important in text comprehension as they are in text production. Semantically, negotiation as a strategy

1.4.2 (Continued)

involves selection and choice as to what will be represented and which communication systems will be orchestrated to sign that meaning; concepts which, again, are as important in text comprehension as they are in text production.

Negotiation may be, in fact, central to our understanding of how children discover the sign function of language itself. "Border skirmishes" between art and writing which arise as a result of negotiation may in fact be a key to both our and the child's understanding and growth in literacy.

One of the things we noticed is that children often begin writing using a script that has certain features of the script present in their culture. They often move to embellish these basic forms with art. Erica, age 4, for example, made a capital B and then drew a little bill and wings on the B to turn her letter into a bird. Mike, age 4, began by writing letters and letter-like forms often turning them into little pictures of a devil's fork, an owl, a chicken, and other objects of importance to him. Terry, age 3, began almost all of his writing and drawing with a letter E and then embellished it with very intricate lines and drawing-like pictures. Alison, age 4, wrote a story about her family using an English-like cursive form and then added little pictures of faces in her script to represent each member of her family. While in each of these cases the children began by writing, they moved to art. This move was crucial as with it these children could not only remember, but reconstruct, what they had written long after the actual writing was

1.4.2 (Continued)

done. By moving between writing and art these children had in effect created signs which not only placeheld meaning, but whose meaning was retrievable across time. Through negotiation these children had discovered pictographs as a writing system; a discovery much like that which many of their ancestors made. Once one has had a border skirmish between writing and art it may not be long, given the language community in which the child is being raised, to accidentally or deliberately have such a skirmish with other elements of language, i.e., sound (mapping oral language onto written language), sight (mapping written language onto written language), or meaning (mapping cognitive data such as size, weight, or other units of meaning onto written language).

1.4.3 USING LANGUAGE TO FINE TUNE LANGUAGE

A third strategy which has much in common with the concept of negotiation, is a strategy which we call "fine tuning language with language." Carolyn Burke has attempted to capture the essential notions involved in this strategy in a model she entitled, "The Linguistic Data Pool" (Figure 1).

The central notions which she attempted to capture in this model are:

(1) What we learn from a language encounter feeds a common pool of linguistic data which can be drawn upon in a subsequent language encounter;

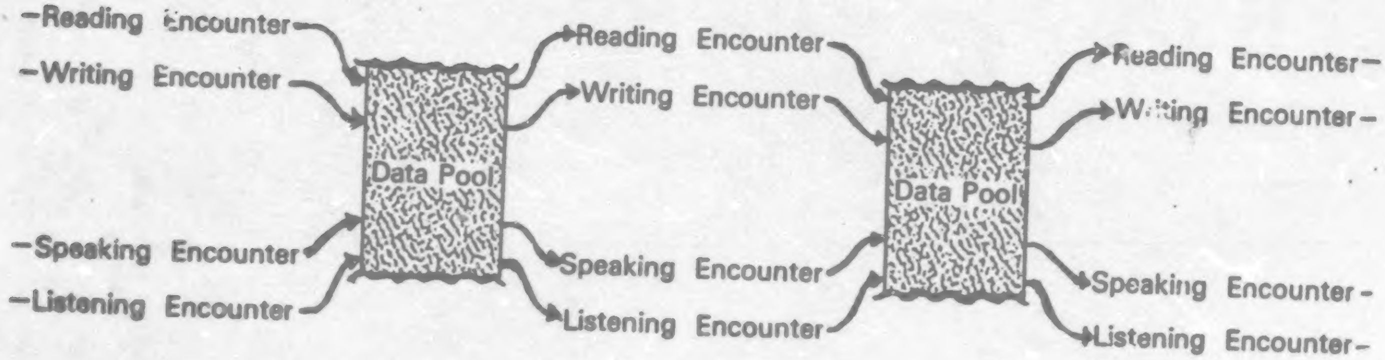
(2) Oral language encounters provide data for written language encounters and vice versa;

(3) Growth in a given expression of language must be seen as a multi-lingual event; in reading, for example, listening to a book read, talking about a book, or attempting to write your own book all support growth and development in reading.

The importance of this model lies in the fact that it poses a parallel, or in-concert, development among the language arts and as such seriously challenges existing notions relative to the supremacy of oral language in the development of written language, as well as the serial growth and development of the expressions of language (typically listening is assumed to precede speaking, speaking to precede reading, reading to precede writing). Both of these notions currently undergird most formal language programs in this country. The model is not meant to suggest that all of the expressions of language are the same, only that language shares much in common across

1.4.3 (Continued)

1.4.3 Figure 1. The Linguistic Data Pool (Burke, 1977)


Reading Encounter
Writing Encounter
Speaking Encounter
Listening Encounter
Data Pool
Reading Encounter
Writing Encounter
Speaking Encounter
Listening Encounter
Data Pool
Reading Encounter
Writing Encounter
Speaking Encounter
Listening Encounter

1.4.3 (Continued)

expressions. This being the case, one strategy which language users can and do use is to build on the available strengths they have in other expressions.

It can be demonstrated that children of a very young age understand and use the strategy of fine-tuning language with language. Many children, when asked to write or dictate a story, obviously build their stories off of and around stories which they have heard, as is evident in the following sample:

> Heckle and Jeckle.
> Him have a new hat.
> Then it blow away.
> And him put that and a whole
> bunch of hats come down.
> And then him put the rest down.
> And all the hats come down.
>
> \- Language Experience Story (as dictated by child)
> \- Ben (age 4)

Less evident, perhaps, but equally important is the fact that from hearing stories, children learn how stories are semantically organized (setting, initiating event, attempt, consequence, response) and use these organizational structures when writing their own stories. Megan's story, placeheld in a cursive English-like script is a classic example (see 1.3 Figure 6) illustrating that this process of fine-tuning language with language is in operation long before the writing looks

1.4.3 (Continued)

representational to our adult eyes. Being able not only to recognize such scripts as writing, but being able to track even earlier attempts at writing, are important efforts (see article 5.9). They nicely demonstrate that writing development parallels development in other expressions of language rather than building off of them in some more serial fashion as has previously been assumed.

The importance of this interplay between the expressions of language has developmental implications. One of the things we noted for example is that when children move into functional writing they often begin by writing stories which they already know rather than by creating their own plot, theme, story sequence and characters. Jake's story is typical of many we received at the first grade level. (See Figure 2.)

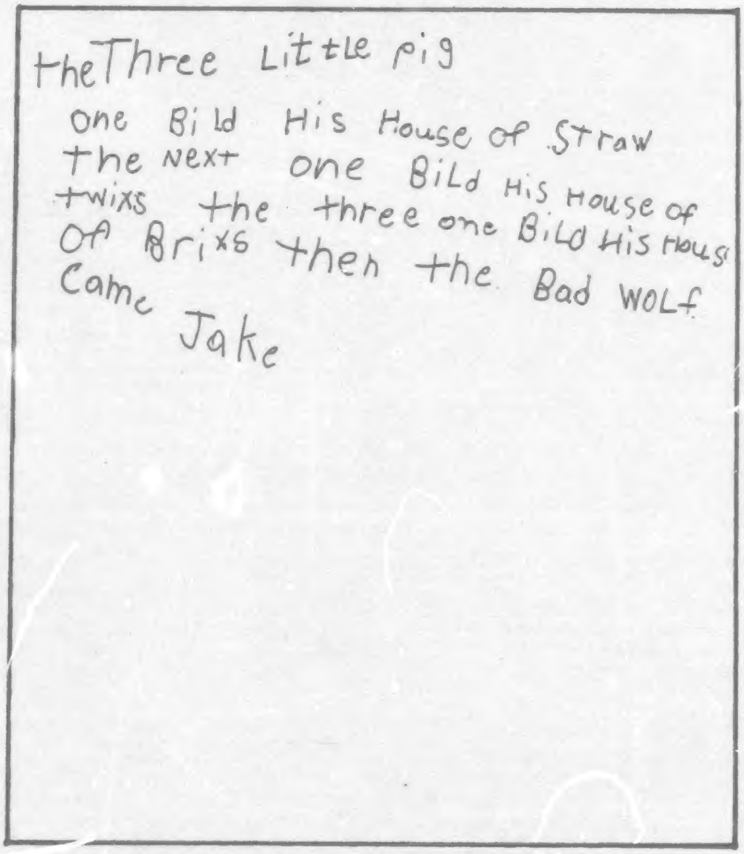
As children strike out, in this case, attempting functional spelling, they intuitively seem to understand the support which the data from other expressions of language provides them. Using a story they know well allows them to focus attention and concentration on the hypotheses they now wish to test without losing a text focus. Often times an adult involved in these kinds of situations might think this less than a wholehearted effort as a result of not clearly understanding nor appreciating the value of the child's strategy at this point in time.

In contrast, we would argue that we adults use this strategy ourselves in that we often begin writing by relying on linguistic data we know, from within which we strike off to mark new ground. This

1.4.3 (Continued)

reliance on accumulated linguistic data allows one a "comfort zone" from which new ground can be forged.

1.4.3 Figure 2. Story (Jake, Age 6)



theThree Little pig
one Bild His House of Straw
the next one Bild His House of
twixs the three one Bild His Hous
Of Brixs then the Bad WOLf
Came
Jake

Context of Situation

Field: Research setting in school; Story Writing Task; Prompted.
Mode: Oral request; Written response; Oral reading.
Tenor: Child to researcher.

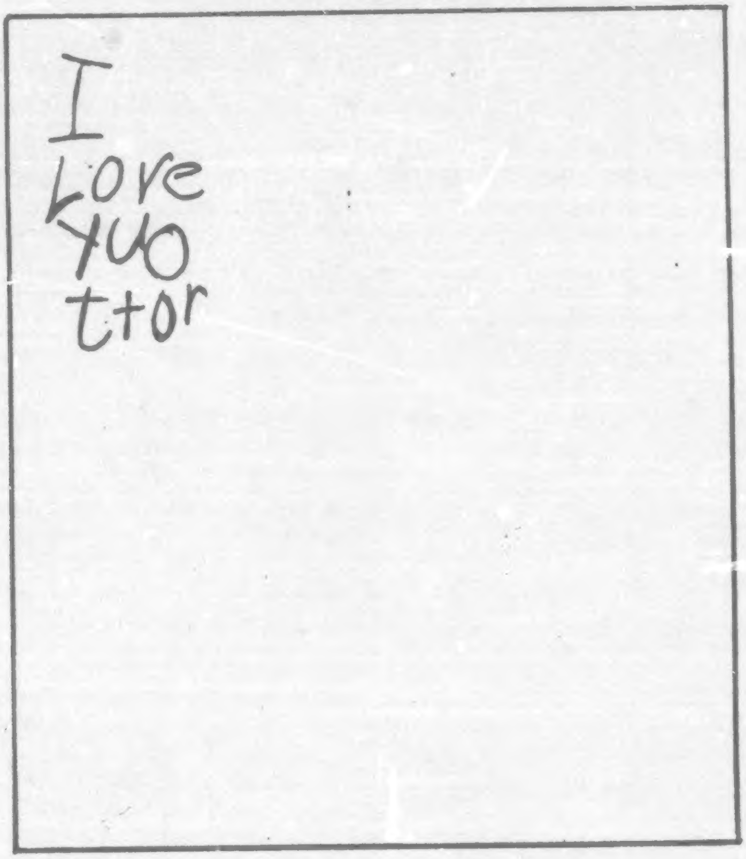
Transcription (as read by student)

The Three Little Pigs
One built his house of straw.
The next one built his house of
sticks. The third one built his house
of bricks. Then the bad wolf
came. Jake.

1.4.3 (Continued)

The same phenomena seems to hold in letter writing where often initial letters seem long on form and short on context. LaShell's letter is a prime example:

1.4.3 Figure 3. Personal Letter (LaShell, Age 6)



I
Love
yuo
ttor

Context of Situation

Field: Research setting in school; Letter Writing Task; Prompted.
Mode: Oral request; Written response; Oral reading.
Tenor: Child to researcher.

Transcription (as read by child)

I
love
you
Jerry

1.4.3 (Continued)

It is important to understand, that what appears on the surface to be a focus on form may well be a function of the child's concentrated efforts to develop new content (in this case content relative to letter-sound relationships in English).

Shannon, too, seems to rely on a ready made oral language pattern as she tests hypotheses as to how one goes about representing written language using symbols and what she knows about the linearity of written English. (See Figure 4)

Other evidence of the importance of fine-tuning language with language is readily available when one examines children's development in writing. In writing, we have observed, oral language often plays a key and integral role in the process. Often this language, even when it seems directed to no one in particular, serves as demarcation of either a plan in abatement, or a plan in action.

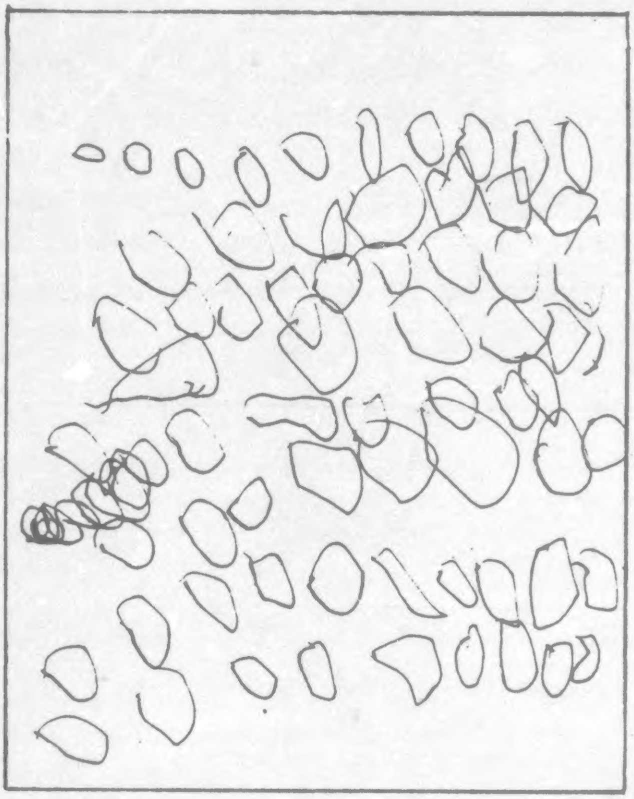
Again, introspective analyses of our own writing suggests that this is not just a phenomenon which occurs among the initiate written language user, as we too take breaks to talk over concepts with colleagues, often give preliminary versions of papers as oral presentations in university seminars, and mutter either out loud or to our social conscious other self as we write.

Functional spelling, often too simply defined as 'spelling the way it sounds,' is a complex but important instance of the strategy of fine-tuning language through language. Much research has been done in this area, though it is, we believe, an error to view functional spelling

1.4.3 (Continued)

as either a precursor to conventional spelling or as primarily a mapping of oral language on written language strategy.

1.4.3 Figure 4. Uninterrupted Writing (Shannon, Age 3)



Context of Situation

Field: Research setting in school; Prompted.
Mode: Oral request; Written response; Oral reading.
Tenor: Child to researcher.

Transcription (as read by child)

This is Anita.
This is Shannon.
This is Robin.
This is Angel.
This is Daddy.
This is Mommy.

1.4.3 (Continued)

From our observations of writers in this study, and others, we have come to see functional spelling as a strategy which all successful writers use. Seeing functional spelling as a stage which children move through on their way to conventional spelling misses the strategic importance of the strategy relative to long-term growth and development across ages.

All of us, even Latrice (see article 5.9) can be said to write functionally. As a strategy, writing functionally allows us to placehold our ideas on paper without worrying about conventional spelling at the point of utterance. It is a keep-going strategy which successful writers use.

The strategy, more broadly defined, is "functional writing," rather than "functional spelling," in that the same observations can be made for our handling of grammar as can be made for our handling of spelling. Successful writers often create syntactic forms which are incomplete at the point of utterance. Writing functionally allows the writer to semantically orchestrate ideas without allowing spelling or grammar to arrest the process. Margaret Atwell (1980), in a study of proficient and less-proficient writers, has observed that less-proficient writers seem to "edit their texts [that is correct spelling, grammar and ideas] before they produce their texts." Functional writing allows more proficient writers a strategy for avoiding this bottleneck.

Similarly, to view functional spelling as an attempt to map oral language on written language is misleading and fails to capture the

1.4.3 (Continued)

more complex and interesting elements of this strategy as it relates to fine-tuning language with language. Our own observations have led us to believe it is as much a strategy of mapping written language on written language as it is mapping oral language on written language.

Clearly, in order for children to move into functional spelling using the letters of our alphabet, they must first have had to have seen, or more appropriately, "read," them. In a very fundamental way, then, the most phonetic of scripts is as much a result of sight as sound.

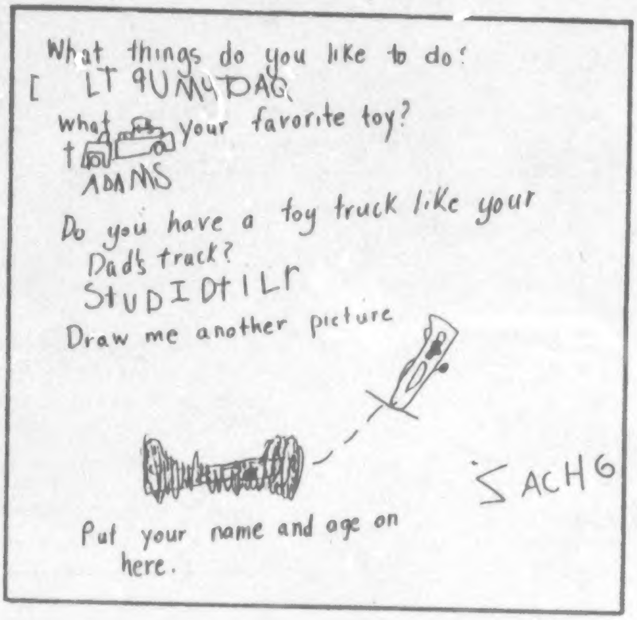
Some children, like Zach, age 6, sound out their text but then add a series of letters rather randomly once they decide it doesn't look long enough. Zach has just moved into functional spelling and already visual memory of letter forms and configurations in addition to sound and articulation are evident in his attempt. (See Figure 5)

The spelling of many single words, too, is not explainable through a phonetic analysis alone. LaShell's YUO (you), which could well have been produced as U if all that was involved was mapping sound (see 1.4.3 Figure 3), has to be explained by the fact that she has already read the word earlier and knows it contains a Y and an O, the latter she elects, after taking a look at her YU, to tag on the end.

Even if one wishes to argue that the YU was produced for phonetic reasons in that the U sound in the word You is quite long, one has to ask why she selected the Y rather than another U or some other letter

1.4.3 (Continued)

1.4.3 Figure 5. Written Conversation (Zach, Age 6)



What things do you like to do?
I LT 9UMYTOAQ
What your favorite toy?
T
ADAMS
Do you have a toy truck like your
Dad's truck?
STUDIDTILR
Draw me another picture

ZACH 6

Put your name and age on
here.

Context of Situation

Field: Child came to conference with mother; as adult and child were listening to a speaker adult slips paper to child with first question.
Mode: Questions read quietly by researcher; Responses read quietly by child.
Tenor: Child to adult.

Transcription (read by child as he pointed to each unit; pointing unprompted)

What things do you like to do?
I (I) L (like) T (to) P (play) U (with) MY (my) TO (toys).
AQ (added after reading saying, "That doesn't look long enough.")
What is your favorite toy?
T (The) (exterminatory truck)

ADAMS was never explained though it was his last name. Zach added orally, "My Dad's got one of these."
Do you have a toy truck like your Dad's truck?
I (I) D (do). TILR and STUD added after reading evidently done as before in that Zach did not feel his original text was long enough.
Draw me another picture.
(Told story as he drew.) (Later retold story for dictation and reading.)
Put your name and age on here.
ZACH, 6

1.4.3 (Continued)

such as O. This does not mean that sound was not involved in her spelling, rather it means that there is a much richer fine-tuning mix involved in even early forms of functional spelling than seems to have been recognized in past writings.

From our own observations we have found that children:

(1) Spell the way it sounds (U for *you*; 11111 for *My name is Lisa*, a strategy which uses one mark per syllable);

(2) Spell the way it articulates (Chridagen for *tried again*);

(3) Spell the way it looks (FRO for *for*; YUO for *you*);

(4) Spell the way it means (AXLACUTTED, a new word created in author's search for the word *guillotine*; WASUPONATIM for *Once Upon A Time*; AOX AOX AOX for *three kittens* when previously AOX was used to represent one kitten);

(5) Spell the way I solved similar spellings in the past (TOOL UP for *Tulip*; REALISSTICK for *realistic*; LOVE A BALL for *loveable*; FINELY for *finally* where intermediate attempts included both *finale* and *finaly*);

(6) Spell by either my or someone else's rules (PIZZIE for *pizza* where the informant said as the IE was written, "I know it's not spelled the way it sounds;" ALSOE for *also*, where the informant said, "I've got to add the E to make it a long O").

As is evident in most of even these examples, multiple strategies are simultaneously involved. These strategies involve multiple expressions

1.4.3 (Continued)

of language. It is, we believe, the orchestration of increasing amounts of linguistic data that may well be identified as growth, though it is important to understand that underlying this movement is a more generic fine-tuning language with language strategy which in its entire complexity is not totally understood at this time.

1.4.4 RISK TAKING

A fourth strategy which successful readers and writers demonstrate is what we call 'risk taking.' Risk taking is a strategy which involves both the attitude of and the actions of hypothesis testing. Practically, it is characterized by experimenting with how language works in this particular context. Risk taking is, we believe, driven by the fact that our latest language discoveries are of more interest to us than are those things which we have already sorted out.

From a research perspective what this strategy means is that rarely are language users interested in demonstrating either what they already know or for that matter testing other's hypotheses; rather, their goal is to test what they are currently interested in. The upshot of this strategy is that when children are requested to test the hypotheses you are interested in, they do it in what often appears to be an almost accidental manner.

A prime example is Dawn. On a task assigned to solicit name writing on two occasions so that we might study the stability of the child's marking, Dawn used two different markings. In the first instance, she wrote her name quite clearly, DAWN, and in the second instance she wrote it in an English-like cursive script. When asked if she had put her name on the later paper she said, "Yes," pointing to the line where she had announced she was going to write it in the first place. Knowing how to simply write one's name isn't good enough. Dawn already knows that. She now must try it a new way showing us that she is aware of the different options available to her.

1.4.4 (Continued)

In an effort to study the child's development of name over time, we instituted a 'Sign-In-Please' activity in several 3 and 4-year old preschool rooms. This involved having a stack of 4 x 6 pads of paper available on which each child (1 name per sheet) signed into the classroom. This was explained to the children as a new way of keeping class attendance. Paul, who wrote his name quite conventionally the first couple of times, one day signed in PAL. When asked, as he was putting away the pen, "Are you done?," he responded, "Well, there's a U that goes in there, but its been giving me so much trouble, I decided to leave it out!" This hypothesis he obviously decided didn't work, as later his name again appeared as it had been prior to his testing, namely, PAUL.

Carol, age 3, signed in using script that looked like the rudimentary forms of C's, L's, and O's (CLOGOCJ) and did this repeatedly. One day she signed in, much like she had always done, saying, "I tricked you last Friday. I signed in Carlos' name!"

Comparing all of Carol's previous signatures to her Carlos signature proved fruitless. What Carol had discovered was the function of this activity in relationship to the contract it imposed on the participants, herself included. Within these bounds, knowing full-well it would be appreciated she decided to test a new more interesting hypothesis, one, in this instance, that was guaranteed to get a response.

Risk taking as a strategy is easily arrested. Many children at 5 and 6 look less successful as writers and readers than do their

1.4.4 (Continued)

younger peers. Often this phenomenon is a function of instruction which stresses a concern for conventional letter formation and spelling. Many 5 and 6-year olds, but very few 3 and 4-year olds, when asked to write, say they can't write. Often after you say, "Sure you can!," they add, "but I can't spell," clearly indicating what they perceive to be the major constraint.

Three and 4-year olds more often than not readily pick up the pen and begin. Some 3 and 4-year olds, having heard the laments of 5 and 6-year olds, and thinking "it's the in thing to do," often say, "I can't write" as they, in the same breath, pick up their pens and begin (an act which betrays their more positive underlying attitude about the process than 5 and 6-year olds).

Fortunately by altering the constraints which children perceive as existent and by assuring them they can write, most will once more begin. It is important to understand the fragileness of this strategy, however, as by imposing constraints--either intended or unintended--one cuts the language user off from the only strategy by which he has to grow.

Another of the constraints which operate to destroy risk taking is what, for lack of a better term, might be called "The Aura of Literacy." From watching and talking with a variety of language users we are convinced that one of the most difficult acts one must perform is to declare oneself a real reader or a real writer. To announce to the world these facts places a heavy burden on one's shoulders. Young children vehemently deny that they are readers even though they obviously are.

1.4.4 (Continued)

Dorothy Menosky tells the story of her trip to Hawaii in which a 5 year old girl sitting beside her on the plane was reading a book.

Dorothy asked her, "What are you doing?"

She replied, "Nothing."

"Oh," Dorothy said, "I thought maybe you were reading."

"I can't read!" came the reply.

This cut the conversation temporarily short. Presently, however, the little girl resumed her reading of the book. Dorothy, more interested now than ever, couldn't help noting her quite obvious attention to the print.

"I saw you reading" she whispered to the girl.

"You did not! I can't read!!" came the reply.

"You can't? Well, tell me what that page was about then."

The little girl read the page following not only the print on the page with her eyes but her head.

Dorothy said, "I saw that! You were too reading. That's exactly what's on that page!"

The little girl hesitated a moment and then said, "Well, okay, so I read!," but then added hastily, "but only that one little part!"

This attitude, we have found, is not unique to children. Adults, too, have great difficulty thinking of themselves as proficient readers and writers. When interviewed, almost without exception, they believe they read too slowly, don't read enough, don't know enough vocabulary, or don't comprehend the way they should. To use reading for the

1.4.4 (Continued)

purposes they express and to read the number of books and articles they report reading, they are, by other's standards, successful readers.

Declaring oneself a real writer appears to be no less formidable. Peter Elbo (1981) shared his difficulty in thinking of himself as a writer even though he is the author of several books!

Interestingly we have found children solve this bottleneck by pretending to read and write. Some even declare when asked to read, "Well I can't really read, but I'll pretend to read," and then do. Others correct, "You mean pretend?"

In some very real ways this strategy works. Our own observations are that many children quite literally pretend their way into literacy.

Risk taking and the attitude of literacy which accompanies it are characteristic of the behavior of successful readers and writers. Together they constitute a process strategy through which the language user challenges personal limits to growth. To live within the constraints of what one currently knows is not to grow. Not playing it safe, testing your most recent insight, pretending, all are forces by which language users evolve to a new level of literacy.

1.4.5 SUMMARY REMARKS

We believe that the four strategies which we have discussed here characterize central processes in the written language process across successful readers and writers of all ages. As such they give insights not only into the process, but also into the development of instructional procedures for helping written language users who are currently being less than totally successful; they lend insight into how to support that process, not to intervene in it.

We further believe that what is true for the language learner is true for the language teacher. In order to continue to grow the language teacher too must step out of existing constraints--either perceived or real--and take a risk; try out what one thinks recent insights and understandings into written language literacy mean instructionally, make some good decisions and some poor ones, receive the natural feedback which comes from both, and in a true sense thus outgrow one's current self.

1.5 ON METHODOLOGY FOR STUDYING WRITTEN LANGUAGE GROWTH AND DEVELOPMENT

So little is known about written language growth and development that just about any reading and writing task which involves a whole instance of language can provide new insight. While this may seem an overstatement, it is nonetheless true, providing the task is continually varied so that one can come to understand how the conditions of the task itself or of the setting are affecting what the written language user is doing.

This is not to say that we place equal value on all research tasks, for some clearly are so closed in terms of what children can do, others are so limited in terms of the unit of language being focused upon, and still others are so seemingly simple that it would prove inefficient and assumptive to use them. Rather it is to say that a very subtle relationship exists between what we know on the one hand, and the conditions under which that knowledge is tapped on the other. This is the relationship between linguistic resources and linguistic constraints. Linguistic resources displayed are dependent upon linguistic constraints present. Alter constraints and you uncover resources.

It does not mean that the tasks we personally developed to study written language growth and development are ideal ones. It simply means that in order to use any task as a vehicle for understanding growth and development one needs to constantly alter and contrast it, in order to expose the constraints it imposes on the language user. The best that any research task can give one is a perspective on the

1.5 (Continued)

process. That is not to say that some perspectives are not more fruitful than others; but rather, it is to say that no single perspective represents truth.

This relationship between constraints and resources is an important one. In a very real sense, in order to understand development we must understand the conditions surrounding development. We must know when development is natural as opposed to being an artifact of either our task or our interventions.

An illustrative case in point is the set of research tasks which we designed and used in this study. Because we were interested in discovering what children know about reading and writing prior to coming to school, the relationship between linguistic constraints and linguistic resources was a central one not only theoretically, but practically.

A first set of constraints we found in our data was several task-interaction effects. These first became evident when we asked children to write stories under a variety of conditions. Simply put, one conclusion we reached was that a child's use of storiness is dependent upon the conditions under which the data were collected. The language experience writing task we used allowed children to test an alternate set of hypotheses than did our free-writing story task, or, for that matter, our story book reading task; though all involved discourse production of a story nature. Children who look like they know little about writing a story under one condition, often demonstrate they know much more than would

1.5 (Continued)

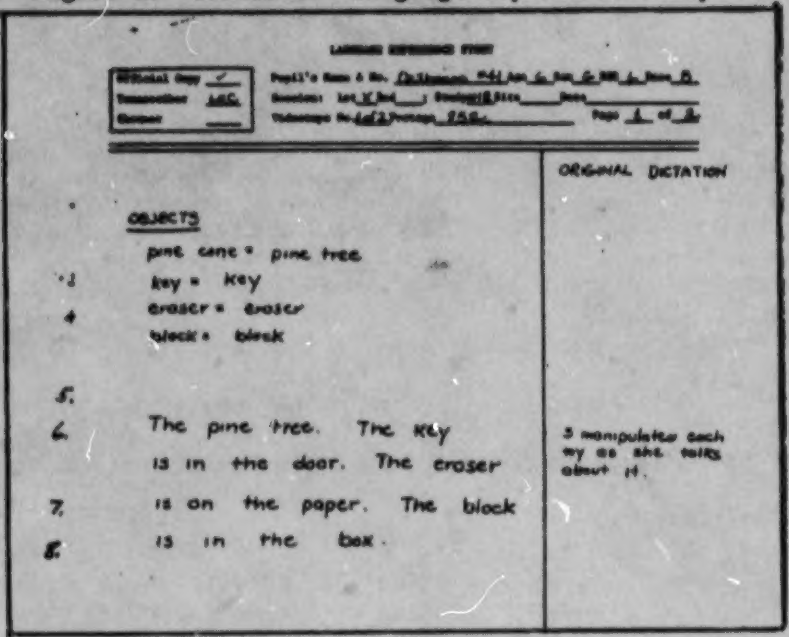
be predicted under another condition. In no instance did the organizational structure of the three stories we collected from any single child contain the exact same elements of story grammar. Story structure, like other elements of language, is created from the inside out by the language user. Each encounter provides a new opportunity to test a set of hypotheses uniquely adapted to the opportunities which are highlighted in the task itself.

Figures 1, 2, and 3 contrast the three stories which we collected from DeShonna, age 6. The language experience task (Figure 1) provided her opportunity to manipulate objects and develop a syntactic frame around which to cohere what appears to be a series of distinct and separate ideas (The key is in the door. . . . The eraser is on the paper).

The story writing task (Figure 2) allowed DeShonna the opportunity to create two idea units which cohere semantically (This is DeShonna. . . . DeShonna is jumping rope), as well as purpose an event (jumping rope) around which she might develop a story line. Completion of the "story," and hence the testing of a full story grammar, appears not to be DeShonna's primary interest, as the task itself not only permits, but from DeShonna's perspective, encourages experimentation with graphic form (note the fun she is having in writing her name in different ways), and the testing of her current understanding of graphophonemic relationships in written langauge (jirp = jumping; roig = rope).

1.5 (Continued)

1.5 Figure 1. DeShonna: Language Experience Story



ORIGINAL DICTATION

OBJECTS

pine cone = pine tree
3 key = key
4 eraser = eraser
block = block

5.
6. The pine tree. The key
is in the door. The eraser
7. is on the paper. The block
8. is in the box.

S manipulates each toy as she talks about it.

Context of Situation

Field: Language Experience Dictation Task; Research Setting; Objects selected and meanings assigned: pine cone = pine tree; key = key; eraser = eraser; block = block.
Mode: Oral dictation with manipulation of objects; Transcription by researcher.
Tenor: Child to researcher

Research Notes

- The "story" created features objects and their location; this feature makes the "story" structure appear expository rather than narrative.
- Each object was manipulated as sentence was dictated.
- Some hypothesis relative to syntactic cohesiveness appears to have been tested (Notice parallelism across sentence forms, i.e.,

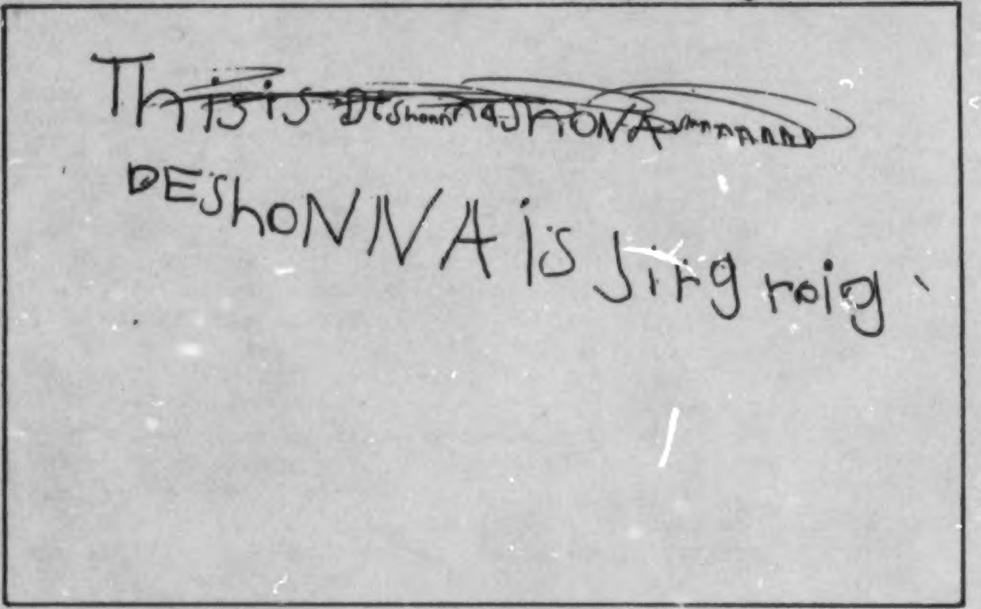
  The key is in the door
  The eraser is on the paper
  The block is on the box)
- Semantic cohesiveness in terms of lexical chains are noticeably absent; this may be due to some implicit or explicit pragmatic contract which DeShonna sees as operating in this task.
- When a propositional analysis is done only an inferred ISA case is shared among predicate propositions (P1, P3, P5, P7):

  The pine tree.
  P1. (>ISA, $, TREE)
  P2. (TYPE OF, TREE, PINE)
  The key is in the door.
  P3. (>ISA, $, KEY)
  P4. (LOCATION: (3), IN DOOR)
  The eraser is on the paper.
  P5. (>ISA, $, ERASER)
  P6. (LOCATION: (5), ON PAPER)
  The block is in the box.
  P7. (>ISA, $, BLOCK)
  P8. (LOCATION: (7), IN BOX)

KEY:
> = Inferred Case
$ = Unspecified Case - Exophoric Reference (Reference outside of graphic display to objects in situational context)

1.5 (Continued)

1.5 Figure 2. DeShonna: Uninterrupted Story Writing



Th~~isis DeShonna DJHONA~~

DEShoNNA is Jirg roig

Context of Situation

Field: Uninterrupted Story Writing Task; Research Setting
Mode: Written Language (Oral directions; writing, reading).
Tenor: Child to Researcher.

Transcription (as read by child)

THIS IS DESHONNA
DESHONNA IS JUMPING ROPE

Research Notes

- The "story" created features an introduction of the protagonist (DeShonna) and the establishment of a single event which could act as a setting.
- DeShonna introduces herself in second person.
- Single complete proposition created (JUMP, DESHONNA, ROPE) as final text after crossout. First statement announces herself in relationship to the text and demonstrates DeShonna's attempt to orchestrate text/context relationships using exophoric reference.
- Because this task allows DeShonna the opportunity to write, she explores new ways of writing her name as well as tests letter-sound information she possesses. DeShonna does not appear particularly intent on exploring or extending her current notions of "story grammar" here, but rather tests more convenient, and probably appropriate, hypotheses given the nature of the task.

1.5 (Continued)

1.5 Figure 3. DeShonna: Story Book Reading

PAGE	TEXT
03	Ten little bears at home. They want to do.
04	One little bear was far away in a boat.
05	Ten little bears was like at home.
06	One little bear was for a walk in the jeep.
07	Then seven little bears was like at home.
08	One little bear was for a roller on a roller coaster.
09	Then one little bear was like at home.
10	One little bear was to the pool to swim.
11	Then next little bear was like at home.
12	One little bear was to the park to jump rope.
13	Then four little bears were like at home.
14	One little bear was to the barber to get a haircut.
15	Then four little bears was like at home.
16	One little bear was to the machine to get bubble gum.
17	Then three little bears was like at home.
18	One little bear went to the air to set the jets.
19	Then two little bear was like at home.
20	One little bear was to the fire . . . to see the fire truck.
21	Then one little bear was like at home. He was sound asleep.
22	So when little bears come home.
23	Then one little bear was up. He like to go to the park to play.
24	No-o little bears was not no like eating.

Context of Situation

Field: Uninterrupted Reading of Picture Story Book; Research Setting
Mode: Oral Reading (Story Production Task)
Tenor: Child to Researcher

Research Notes

- Directions to DeShonna included "Read or pretend to read story."
- DeShonna discovers story structure of book using pictures (pictures in this task act as a residue form of adult story grammar; child uses pictures to rediscover this form and seemingly proceeds as if she knows this sort of predictable relationship would exist in this type of text).
- DeShonna orchestrates syntactic structures and semantic structures through repetition, an effect which gives the reader of the selection the sense of a highly developed "story grammar," though one different from that found in the fairy tale genre.

1.5 (Continued)

The story reading task (Figure 3), like the story writing tasks, involves text production on the part of the language user. Under this condition, where DeShonna is offered the opportunity to create a story using the residual story grammar support offered by the pictures in the book, DeShonna demonstrates her understanding of not only this type of story structure, but how both syntactic and semantic cohesion operates in orchestration to create a notion of "storiness."

The descriptive sequences of DeShonna's language experience story (Figure 1), as well as the event sequences in her other stories (Figures 2 and 3) are features of most stories. They are, nevertheless, highlighted events of particular stories which DeShonna creates for us. Such highlighting is dependent upon her perception of the task and what language hypotheses she sees it allowing her to test. To impose a single standard of well-formedness on children's stories is to do a disservice to the inherent right of readers and writers to develop their own story structure given their sensitivity to the unique situational constraints operative in the setting. By altering the task, or in our case, having alternate story writing tasks, the constraints operating in any given task are exposed. Such exposure, it seems to us, is important as it allows researchers to move beyond understanding convention to understanding language development.

A second set of constraints operative in the research tasks which we developed is what we term pragmatic constraints. Pragmatics is defined as the rules of language use operative in a particular

1.5 (Continued)

context of situation. Given our research setting, in which an adult is interacting with a child, a superordinate-subordinate relationship is set up. Coupling this with the conditions of data collection (in a preschool), a teacher-pupil relationship is automatically assumed by the child. Under these conditions children not only readily accessed a school writing schema when asked to write--kindergarten and first graders write words which they know how to spell--but also took any side comments much more seriously than we sometimes intended them to be taken. The older the child, the more noticeable the effect.

If we had difficulty, for example, hearing what the child said, we often asked, "What?" requesting, we thought, a simple repeat of the response. Children, however, thinking we didn't like their first response, read the "What?" to be disapproval and often changed their answers. This, in spite of the fact that an analysis of the videotape protocol materials often clearly shows that the child's first response in the environmental print task, for example, was qualitatively a better one than the altered response.

Nor does the effect of a simple "What?" wear off easily. Often times the nature of the child's response to subsequent pieces of environmental print, long after the What-instance, continues to reflect itself in the manner in which the child responds to other print items in the task. For examples of both task and pragmatic effects operating in our research setting, the reader is referred to article 5.4.

1.5 (Continued)

During language experience story dictation, a question relative to what was dictated, a casual comment such as, "And then what happend?," or a simple drumming of one's fingers, alters the very nature of the story so that the final product is more reflective of the child's sensitivity to pragmatics than it is of the child's current level of cognitive development. A simple test of pragmatic effect is to study pieces of text generated after questioning has occurred. Using propositional analysis as a heuristic procedure, what we have found is that conceptual relationships implicit in the researcher's question become the conceptual relationships which are expressed in the item of text produced at the time.

There is a paradox here. Asking some children casually, "Are you done?," causes them to quit immediately, while others read the same message as an indication that more is expected. Since predicting how these comments are going to be interpreted is problematic, the best option is seemingly not to respond at all. This, however, poses its own problems, as given two language users in close proximity, refusal to respond or even chat casually is very unnatural and poses a set of constraints which are even harder to map and come to know.

There is not, then, an easy answer to this problem. Nor is it the case that in some language instances there are constraints and in others there aren't. Rather, constraints operate in all language settings. One cannot eliminate constraints, only alter them so that those typically operative and whose effect is known are no longer

1.5 (Continued)

playing the powerful role they might play. We found, in this regard, that settings where the constraints are allowed to evolve during the course of the event itself often provide the best insights into current levels of development. A written conversation with a 5-year old in a home situation where one is known simply as an old friend of the parents who stopped by for a visit is a particular example of one such setting we found powerful.

Given these insights into task and pragmatic effects, three things seem called for relative to the study of written language growth and development. One, the context of data collection must be described as fully as possible. In this regard we have found Halliday's notions (1980) of field (what's happening), mode (communication systems used), and tenor (social relationships involved), helpful as descriptive categories. Together these constitute key elements of register. The register of a language event, however, is not entirely a given entity, but rather evolves during the course of the event itself. This being the case we have found it necessary to monitor changes in the register of a language event at various intervals such as turn taking.

Two, one must adopt an attitude of ethnography even in doing experimental and quasi-experimental research which involves whole language events. This attitude, it seems to us, is one which respects process and attempts to study how oneself and the task conditions are affecting the data being collected.

1.5 (Continued)

Third, insights gleaned from data collected in research settings must be checked out in other-than-school settings if one wishes to make statements about natural development. This can be done as we have demonstrated through smaller follow-up ethnographic studies which are designed to verify leads and insights gleaned from the original data bank. If the predicted trend does not show up in these natural settings then one must return to study constraints operative which account for the phenomenon which has been observed.

Methodologically, then, we advocate an ethnographic approach to the study of written language growth and development. Ethnography assumes the study of a whole nature instance of language. Given this constraint, ethnography is not so much a particular set of procedures as it is an attitude which respects the process and one's involvement in that process. Given the fact that language is first and foremost a process, ethnography seems an ideal methodology for the study of language. Categories which are used to analyze developmental data must evolve from the data itself and be verified in situations where constraints are known through study of the linguistic resources being demonstrated and used.

Until we get a great deal more familiar with the constraints that operate in a language setting and how they evolve to affect the languaging event, we see no other alternative but to collect the bulk of our data on videotape. While we hate to admit it, we were simply not smart enough at the onset of this study to know what to record.

1.5 (Continued)

Had we not used videotape, it scares us to think what conclusions we might have reached and what data we would have been left to use.

Nor did our informants find us fast learners. Child after child had to confront us before we could perceive even the most blatant case. If one is intent upon 'finding out' rather than 'proving' something in research, few other options allow the heuristics of contrast, variation, and distance needed in coming to understand and know.

Having a videotape data bank bought the time our informants needed to teach us. With the new eyes they gave us we then could look for similar patterns among protocols and test our new insight in a more natural language setting. The findings reported in this volume have stood this process of verification. The merit of this methodology rests on the sheer number of myths about written language growth and development we have begun to both question and dispel.

2.0 UNINTERRUPTED DRAWING AND UNINTERRUPTED WRITING

2.1 TASK DESCRIPTIONS

The uninterrupted writing task involved giving children a blank piece of paper and asking them to write their name. Once the children had completed their name, they were asked to write anything else that they could write. At each point that they stopped during this task the researcher responded, "Write everything you can write." This procedure was continued until the child self-terminated this phase of the task by saying something like, "That's all," or "I can't write anymore."

The uninterrupted drawing task involved giving children a second sheet of paper, and asking them to "Draw a picture of yourself so that we may keep it to remember you by." Once the children had completed their picture, they were asked to write their name on the paper.

Both tasks were administered individually to children with order of presentation fixed as indicated above. All data were collected on videotape.

2.2 TASK INTENT

At what age do children differentiate art from writing? What is the relationship between growth in writing and growth in art? Is art a more advanced communication system for young children, and if so do children naturally use their more advanced knowledge of one system to support growth and development in a weaker system? Under what conditions do children differentiate art from writing? What is the nature of the support one communication system (like art) offers another communication system (like writing) for the young child? How consistent are children's writings of their name across a variety of name writing conditions? Do developments in writing reflect themselves in children's writing of their name first as past research suggests? What is the relationship between how children write their name and the strategies which they use in writing? What is the role that convention plays in the child's move into writing? What does growth and development in writing look like prior to recognition of it as either conventional or representational in an adult sense? What are the significant characterizations of growth and development in writing across 3, 4, 5, and 6-year olds? What is the specific nature of the young child's decisions in writing?

Questions such as these make several assumptions: First, that the very young child is a written language user; second, that alternate communication systems support growth and development in the process; third, that the strategies children employ as they move into writing are

2.2 (Continued)

organized, worthy of study, and have applicability to our understanding of the writing process generally.

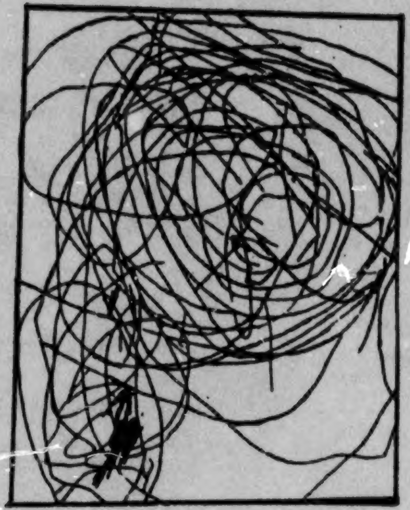
This task was designed so that not only these questions but these assumptions could be studied. Several of the essays in Section 2 and several of the papers in Section 5 address particular questions and assumptions highlighted in these tasks. Several related papers are being prepared but will appear in the second volume. There is no attempt in the discussion which follows to recover all of this theoretical ground. The reader is, therefore, referred to Sections 2 and 5 of this report for further discussions and analyses of the data collected under these task conditions.

2.3 EXEMPLARS OF TASK DATA

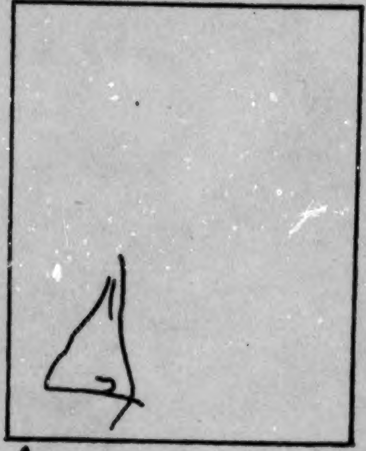
Because data collection was videotaped, process as well as product data were available for analysis. Following are four sets of data typical of those produced by children at the various age levels in our sample.

2.3.1 LATRICE (AGE 3)

Writing: Final Product, Latrice (Age 3)



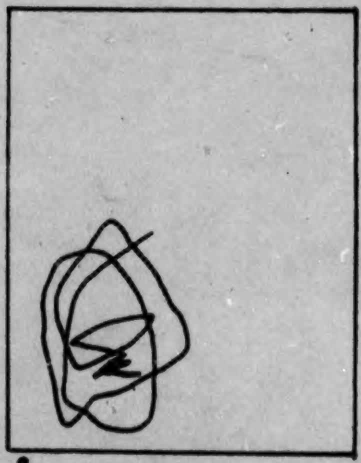
Latrice, age 3, when asked to write her name, began by writing what appears to be the letter L. (See Sample A)



A

When pushed to write anything else she might write, Latrice picks up her pen and using a free-flowing circular stroke all but obliterates her initial display of literacy. (B)

Midway in this second effort, Latrice says, as much to herself as to the researcher "Gonna make an I."

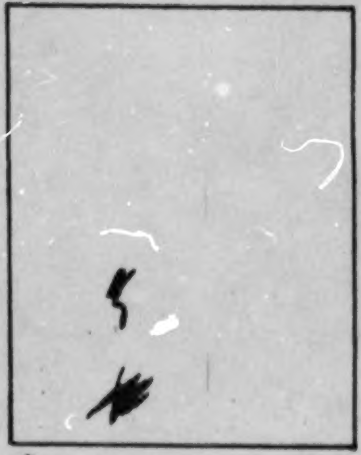


B

2.3.1 (Continued)

Without seeking a clean spot on the paper, she proceeds to make a large dot in the middle of, if one knew no better, her initial scribble. The researcher then says, "You gonna make an _I_?" to which Latrice responds "Right here" and produces a line with a dot attached to the top.

And it is a beautiful _I_, upside down, true, but clearly recognizable as being what Latrice said it was. (C)

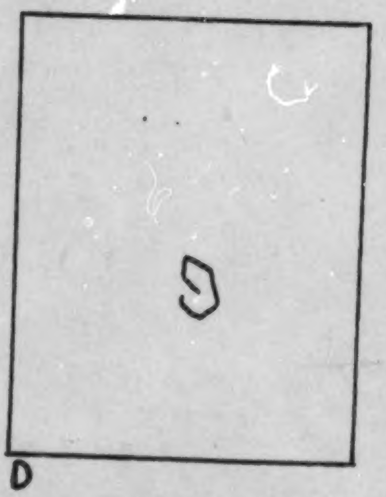


C

Latrice dots the _I_ with such savage strength that, even later, when she has written still more of what she can write over the top of these 3 initial efforts, it is clearly visible. At this point Latrice starts to hand her paper to the researcher but becomes interested in the back of the page where the felt marker has soaked through.

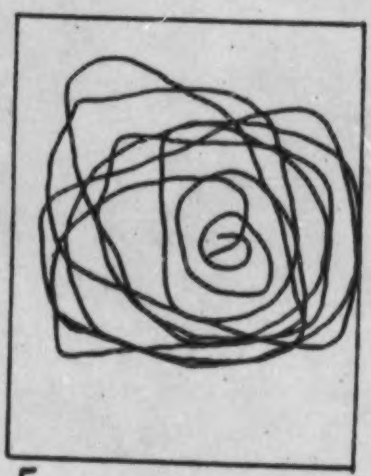
2.3.1 (Continued)

The researcher turns the paper back to the front, asking Latrice if she can write anything else. In response, Latrice moves to a new spot on the paper, announces she can, "make a dog," and does so using a meticulously drawn circle. But she is dissatisfied with her efforts for she says, "I can't make a dog." The researcher encourages her to write anything else she can write but instead Latrice asks the researcher to make a dog for her. And once again the researcher asks her what else she can write. (D)



D

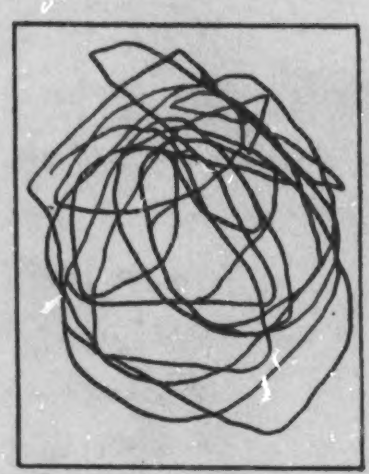
This time Latrice tells us, "I'm gonna draw a Mickey Mouse," and begins to make connected circular motions that get larger and larger as she continues her engagement in the process. When she completes this aspect of the task she hands her paper to the researcher. (E)



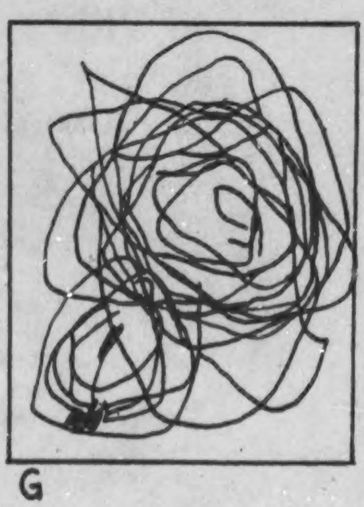
E

2.3.1 (Continued)

Pushed once more to write anything else she can write, Latrice retrieves her paper and using the circular motion even more freely now, manages to tie her whole product together so that the end result appears to be nothing but one huge mass rather than the series of distinct literacy efforts that it is. (F)

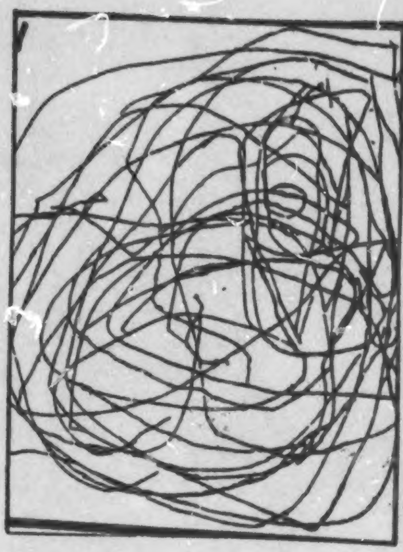

F

Latrice signals her completion of the task, saying "There, that's all." When the researcher says, "Put the top on the pen," Latrice begins to write again, stopping when the researcher asks if she's finished. When asked to read what she wrote, Latrice says "Right here and around here." When the request to read what she has written is repeated, Latrice says, "That's a dog," pointing to the scribble where indeed she had indicated she was going to placehold dog while writing, "And that's Mickey Mouse" pointing to the set of scribbles which included her initial but important attempts at placeholding her name. (G)

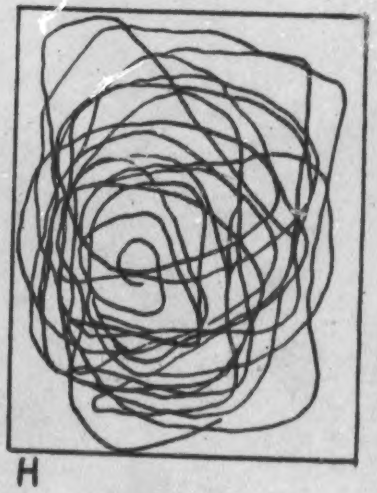

G

2.3.1 (Continued)

Drawing: Final Product, Latrice (Age 3)

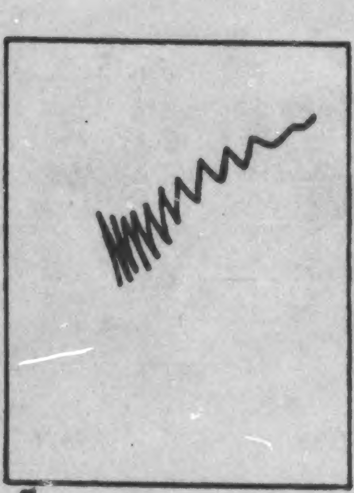


Having completed this task, Latrice was given a second sheet of typing paper and asked to draw a picture of herself so that we could remember her. Latrice did this using the same combination of meticulous and huge circular motions she had used in "making her dog."



2.3.1 (Continued)

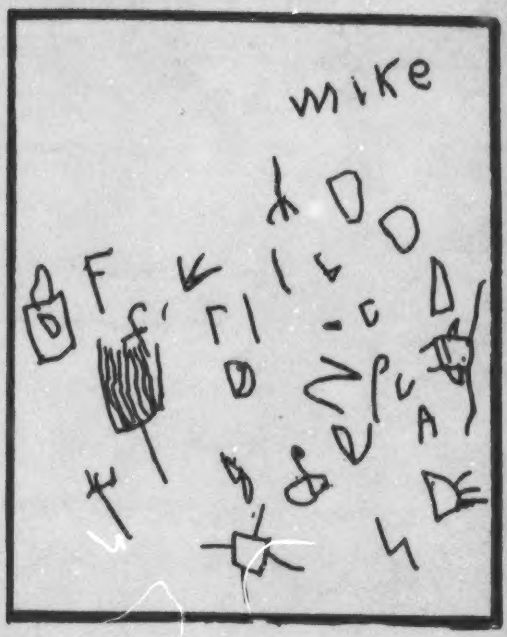
When asked to write her name on the paper, Latrice turned the paper over and did so, proceeding left-to-right, using a linear up and down stroke. (I)



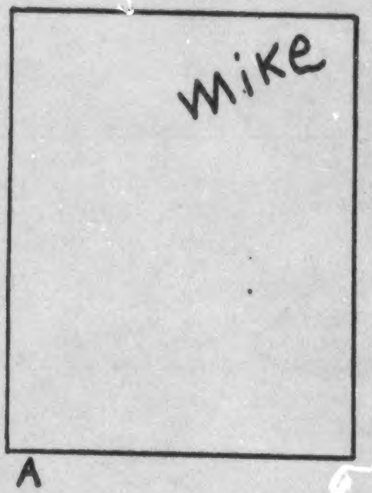
I

2.3.2 MIKE (AGE 4)

Writing: Final Product, Mike (Age 4)



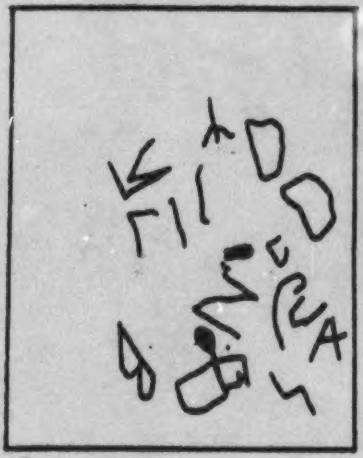
When Mike, age 4, was asked to write his name, he placed an M on the paper and then looked up at the researcher. A moment later he resumed his writing, producing in succession the letters I, K, and E. After each letter was produced, Mike again looked up at the researcher. The product of his effort is the expected response--a linear display of his name. (A)



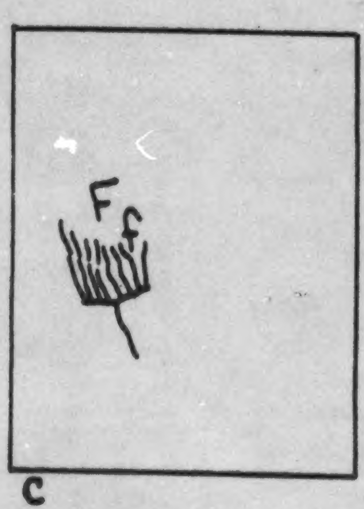
A

2.3.2 (continued)

The request to write anything else he could write resulted in behavior that some would regard as surprising. Instead of continuing to produce conventional English letters, Mike makes a set of marks reminiscent of Egyptian hieroglyphics. These marks were generated with a combination of straight and curved lines that sometimes result in a letter we recognize (e.g., A), but more often than not appear as intricate formulations of his own. At one point during the process, Mike says, "That's a rock," after completing one of his forms. (B)


B

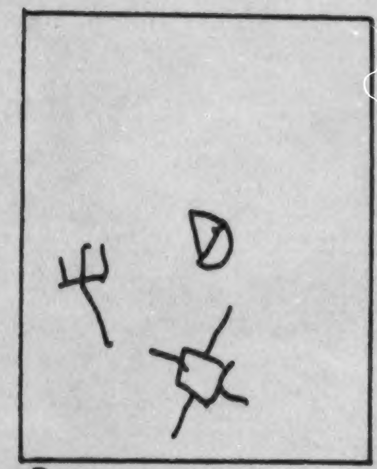
Mike then paused and the researcher asked "Are you finished?," prompting Mike to continue writing. As he begins to make what turns out to be a capital F Mike says, "I got one more word to do." After finishing his capital F he makes a lower case F and then a form he identifies for us as a rake. (C)



C

2.3.2 (Continued)

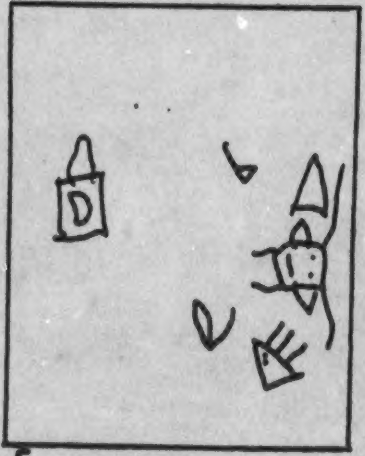
The researcher again asks Mike if he is finished writing and again Mike responds by generating more forms. (D)



D

Another pause in the writing process prompts the researcher to ask, "Are you finished writing, Mike, or do you have something else to write?" Mike is a child of many words for he responds, "I have a lot of things to write!" After making another form, Mike produces a capital L but instead of moving on to another new form he adds a curved line to the already existing L and tells us, "That's a chicken." He then announces, "I can make a house," and does so, adding "Now I'm going to make a door" as he writes.

Mike continues to announce his plans. He says, "I can make a triangle" before making one and as he makes a square on the paper he says, "This is a flag, but it ain't a flag. This is a hoot owl but it has pinchers under it. There's his mouth." When the researcher asks if he's finished he adds ears to his hoot owl. Finally, Mike puts the cover on the pen. (E)

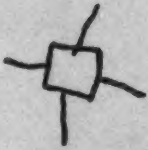


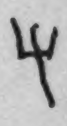
E

2.3.2 (Continued)

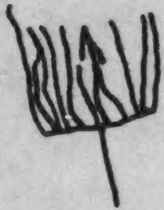
When asked to read what he has written Mike works his way around the page pointing to each item and reading it for us. He reads:

"Spaceship"

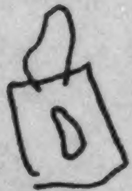




"I made a devil rake."

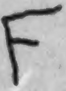


"And a rake."

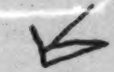


"I made a house."

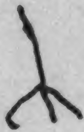
"And I don't know what that is."



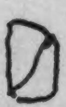
"Spaceship"



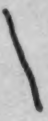
"I need to make a little more stick on this" (as he adds more to the vertical line). "That's a bear."



"This is a peach."

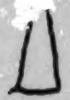


"And this is a banana."

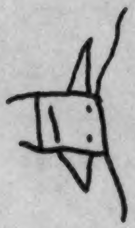


2.3.2 (Continued)

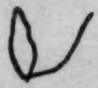
"A triangle"

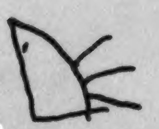


"A hoot owl"

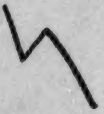


"A fish, and this is a stream to catch fish in" (pointing to the right hand line). "That's a chicken."

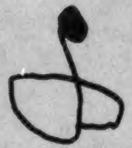




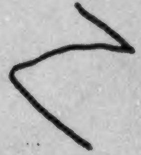
"That's a broken stick."



"That's a roller skate. That's the holder" (pointing to the top line).

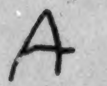


"This is a seven."

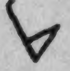


"This is a foot."

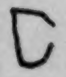
"Don't know what that is."



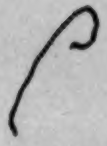
"This is a little triangle on a stick."



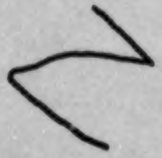
2.3.2 (Continued)



"This is another stick that's broke."



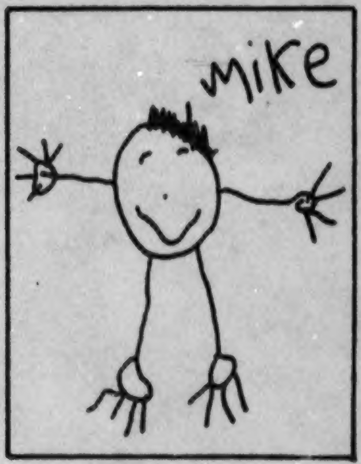
"This is something the men dances with."



"This is a seven."

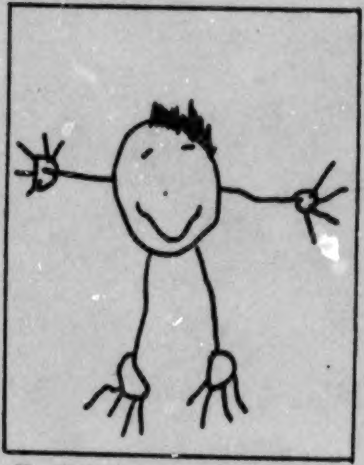
To complete his reading, the researcher points to his name and asks Mike what it says, to which he replies, "Mike."

Drawing: Final Product, Mike (Age 4)



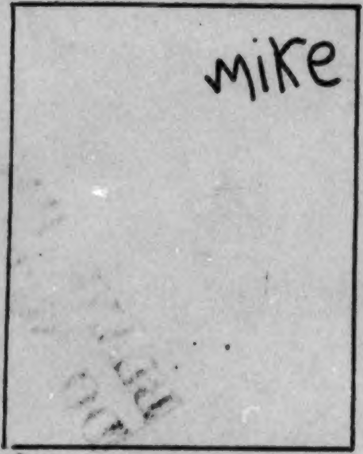
2.3.2 (Continued)

Mike approaches the drawing task in a manner similar to the first, announcing his plans as he draws. He begins by drawing a circle to which he adds a mouth, saying, "There's my mouth." A nose and a pair of eyes are added. As he draws his hair he says, "There's my hair." He then continues by drawing arms ("I have to draw some feet.") Then, before drawing the fingers on the right hand he comments, "Have to make fingers" and when he moves to the left hand he says, "Little fingers." Legs, feet, and toes are eventually added to complete his self portrait. Mike signals the researcher that he's finished by announcing, "I'm done." (F)



F

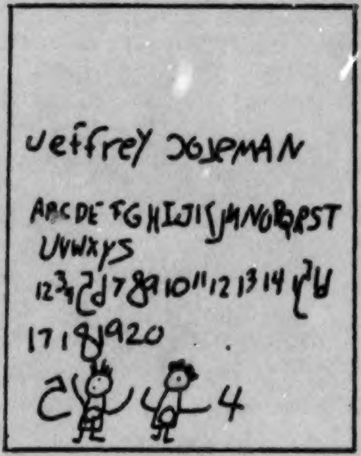
Finally, the researcher asks Mike to put his name on his paper. Mike complies with this request by once again producing the expected response, using the same set of letters to represent his name as in the uninterrupted writing task. (G)



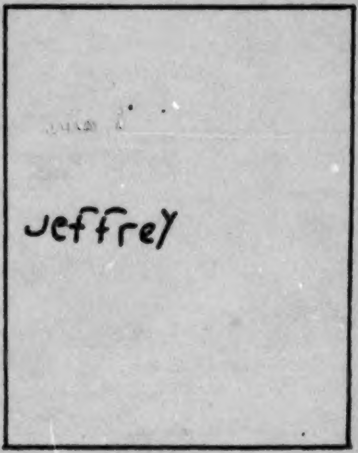
G

2.3.3 JEFF (AGE 5)

Writing: Final Product, Jeff (Age 5)


Jeffrey ColeMAN
ABCDEFGHIJIJMNOPQRST
UVWXYS
1234567891011121314 15 16
17181920
C 4

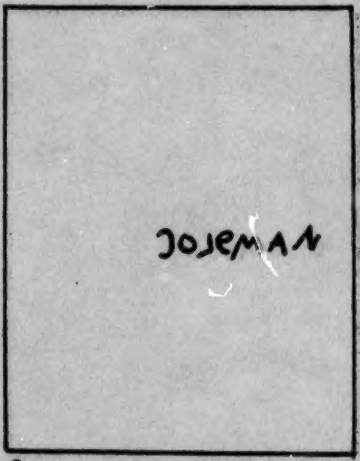
When Jeff, age 5, is asked to write his name he tells us, "I know what my name is," and promptly begins, writing each letter in his name, naming them as he does so. (A)



A

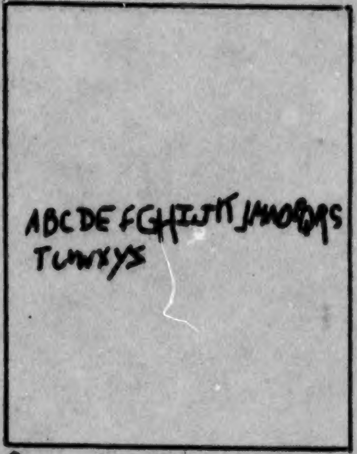
2.3.3 (Continued)

A request to write anything else prompted Jeff to say, "I can write my last name." Again he names each letter in his last name as he writes it on his paper. To be sure, he produces a backwards C and L but it is clear that his last name is COLEMAN. (B)



B

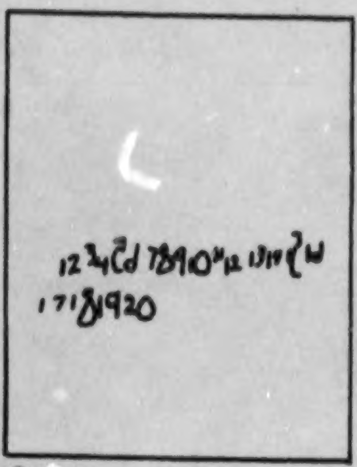
Asked to continue writing anything else he can write, Jeff announces, "I know what the alphabet is" and as he writes the letters (in the conventional order) he not only says the name of each letter but comments on its presence or absence in his name. In short, he seems intent on attaching personal meaning to a linguistic convention, the alphabet. (C)



C

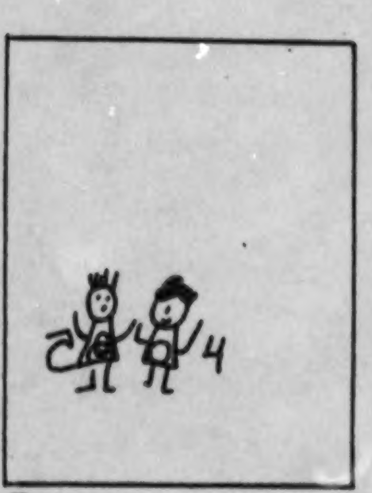
2.3.3 (Continued)

At this point the researcher asks, "Can you write anything else?" Jeff responds, "Yep, numbers. I can write all them to 20. Here I go!" and displays the numbers 1 through 20 in a linear fashion, naming them and talking about how he forms them as he writes. It is interesting to note that as Jeff begins to write the number 10 he says, "One (meaning the numeral one as a component of the number ten) is a I--'cause I gots crossed right there and there" (pointing to the seraphs on the I in his alphabet). As he reaches the number 17 he reminds us that it is made up of the numerals 1 and 7 and that "20 is a 2 and a 0." (D)



D

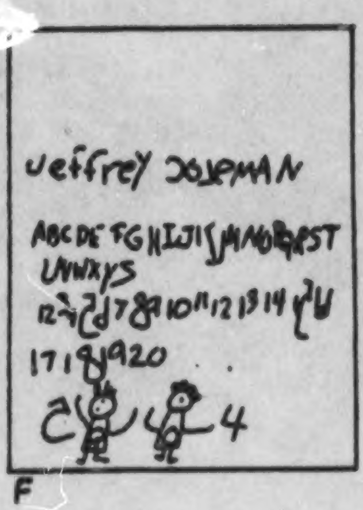
When the researcher asks Jeff if that's all he can write, Jeff says yes and then says, "I'm gonna write myself." He then produces a drawing of himself, sharing his plans with us orally as he draws. After this he announces, "I'm gonna write my girlfriend. She's 4 years old. I'm putting a 5 by me. I make a 4 by her."



E

2.3.3 (Continued)

As he talks he continues to work on his paper, first drawing his girlfriend and then writing his age next to his self-portrait. Jeff tells us that his girlfriend is sad because she doesn't have a lion on her shirt while he does. But he then informs us that she's happy after all because she has a picture of him on her shirt! After placing the 4 next to her picture Jeff self-terminates his involvement in the process, saying, "There, I'm done." (E)



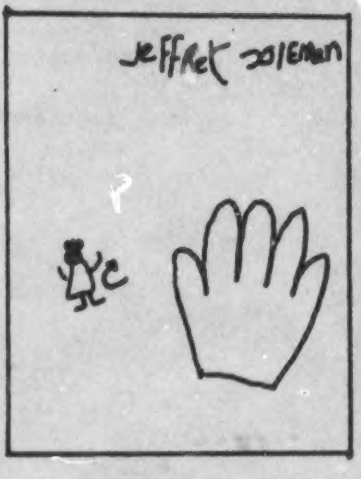
F

When Jeff is asked to read what he has written, he starts at the top of the page and, moving his finger from left to right, says, "I write my name--and my alphabet--and my numbers and me and my girlfriend. And here's my 5 and here's my 4." (F) While Jeff clearly involves himself in the process, he does so with an eye toward his past writing encounters in his kindergarten classroom. He writes all those things identified by his teacher as high priority items for writing--his

2.3.3 (Continued)

name, the alphabet, numbers. Implicit in his written record is the echo of instruction. Even Jeff's move to personal expression through pictures falls within the meaning potential of writing as it has been established in instruction, and, while we would argue that moving to an alternative communication system to express meaning is a useful and legitimate strategy, in this case Jeff uses it to evade further engagement in the writing process.

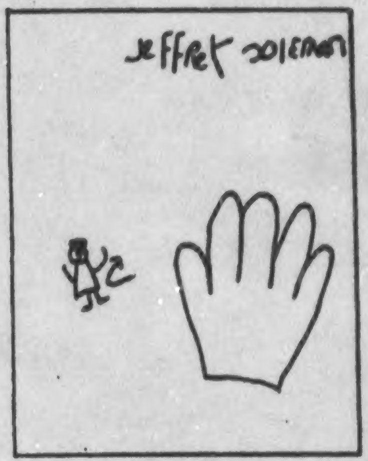
Drawing: Final Product, Jeff (Age 5)



2.3.3 (Continued)

The researcher then asked Jeff to draw a picture of himself. He complies with the contract and does so telling us that he's making a big lion on his shirt. Then he announces, "Making a 5 by me," as he does so. When the researcher asks if he is finished drawing his picture, Jeff says that he's going to draw around his hand. The completion of this task prompts the researcher to request that Jeff write his name on his paper. Jeff makes a J and an E and pauses.

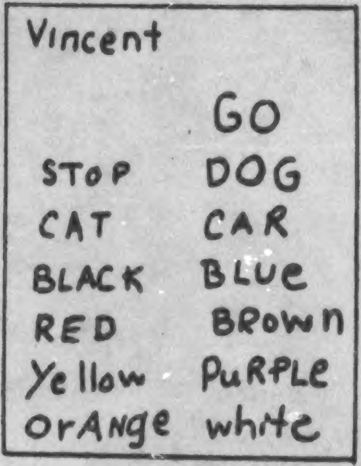
At this point he says he can't remember how to make an F so he looks back at his name as initially produced during uninterrupted writing and says, "I know now" generating the rest of his first name. Jeff then says, "I gotta make my last name too" and proceeds to make each of the letters in his last name, commenting on the formation of each as he goes. When Jeff finishes writing his last name the researcher then terminates the task. (G)



G

2.3.4 VINCENT (AGE 6)

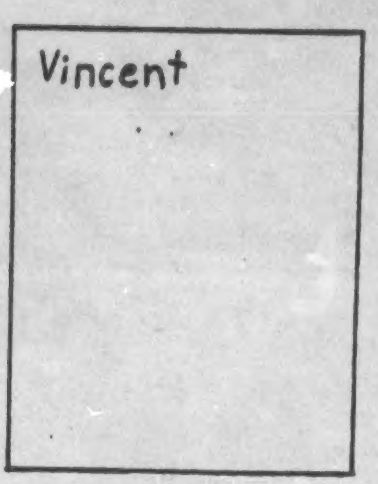
Writing: Final Product, Vincent (Age 6)



Vincent

GO
STOP DOG
CAT CAR
BLACK BLUe
RED BROWn
Yellow PURPLe
orANge white

Vincent, age 6, responded to the request to write his name by generating each of the letters in his name and displaying each of the perfectly formed letters in a linear fashion. (A)

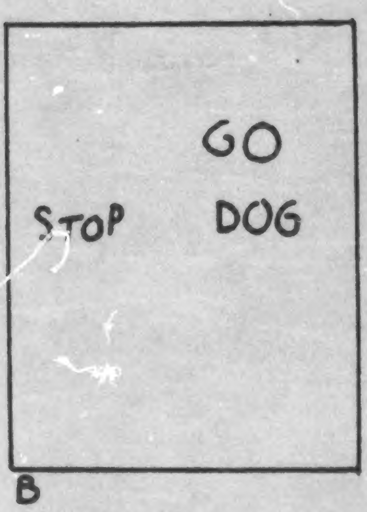


Vincent

A

2.3.4 (Continued)

When asked to write everything else he can write, Vincent writes GO, placing it to the right of his name. At this point he stops, prompting the researcher to ask if he can write anything else. He begins to write again, this time positioning the word STOP directly below his name. Once again Vincent stops and once again the researcher asks if he can write anything else. This time Vincent places the word DOG underneath GO and stops. The emergence of a list is evident. Evident too, are the loud silences that necessitate the researcher's continual prompting. It is as if Vincent is engaged in a conversation with himself in which the topic is the relative safety of producing one item over another. Vincent opts for safety and produces those items that reflect his instructional experiences. (B)



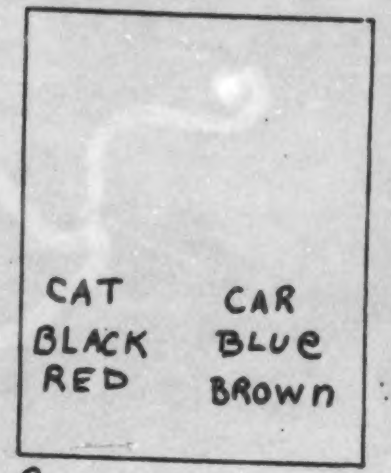
B

The presence of these pauses is counterintuitive. We would predict that 6 year olds would have more language

2.3.4 (Continued)

information to draw on than 3 year olds so that the older children get, the faster their written language production becomes. But their experiences with written language (including instructional experiences) seem to slow them down instead of speed them up. Their extensive experience with written language means that they do have more to draw on, but also more to orchestrate, resulting in a slower rate of production. Simply stated, the more you know, the more you don't know.

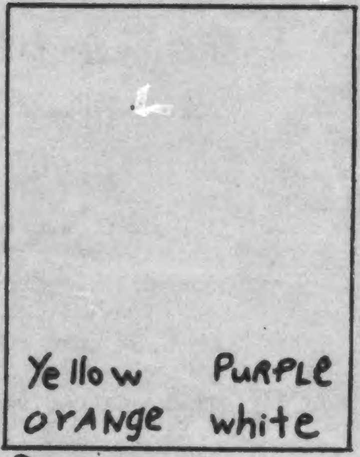
Pushed further to write anything else he can write, Vincent continues to generate his list, going from left to right and top to bottom as he places the words on the paper. (C)



C

2.3.4 (Continued)

The researcher again asks Vincent if he can write anything else and Vincent responds by producing more words in the manner described above. We would have to agree that Vincent has certainly learned his color words. In fact, writing, for Vincent, lies totally within the written language world of meaning established by his classroom teacher. Color words are among the first sets of words taught in first grade classrooms and names of common pets (CAT, DOG) soon follow. And before encountering the instructional setting, he lived within the meaning world of his parents which may account for the production of GO and STOP after writing his name. It is also interesting to note the changes in letter formation as he moves through his list. His initial decision is to represent all the words he can write in capital letters but by the time he adds the last word to his list he demonstrates the same control of lower case letters as seen in the representation of his name. (D)

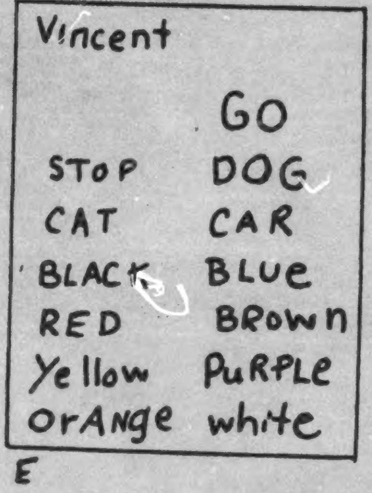


Yellow PURPLE
ORANGE white

D

2.3.4 (Continued)

Vincent, asked to read what he has written begins with GO and moves from left to right, top to bottom, producing the expected response for each of the items on the page. Interestingly enough, the one item he chooses to omit during reading is his name. The very thing we regard as most representational is viewed from a different perspective by the child. It is as if name-writing exists outside the semantic field of the text, functioning instead as the means by which the paper can be identified by the teacher; this omission is clearly a pragmatic effect. (E)

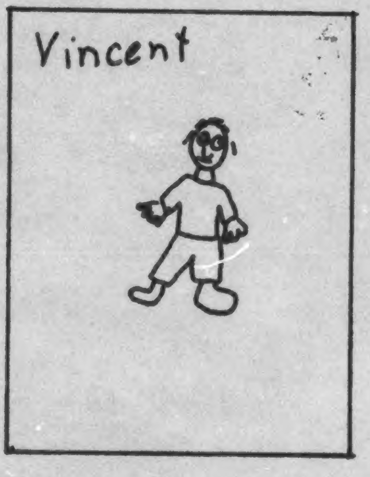


Vincent

GO
STOP DOG
CAT CAR
BLACK BLUE
RED BROWN
Yellow PURPLE
OrANge white

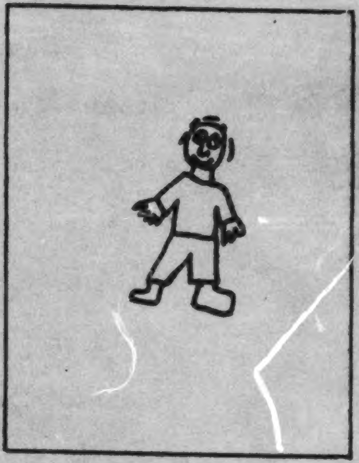
E

Drawing: Final Product, Vincent (Age 6)



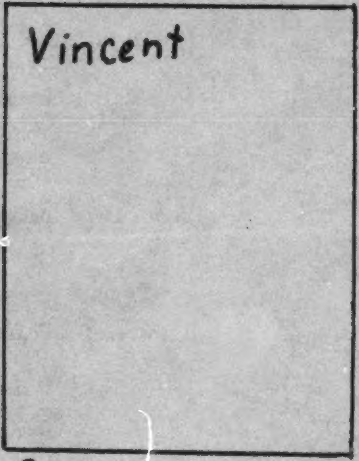
2.3.4 (Continued)

At this point the researcher asks Vincent to draw a picture of himself. Vincent complied with the contract and generated a self-portrait. (F)



F

When he finishes his drawing, Vincent is asked to write his name and once again he generates each of the letters in his name, placing them from left to right in the top left corner of the page. (G)



G

2.4 KEY FINDINGS

2.4.1 CHILDREN'S DIFFERENTIATIONS BETWEEN WRITING AND DRAWING ARE SYSTEMATIC AND ORGANIZED

Children, as young as three, regardless of race or socioeconomic status, differentiated writing from drawing. Even in those instances where an examination of the produce alone does not clearly reflect this differentiation, an analysis of the process through which they produced the product, shows that such a differentiation has been made. This finding is most evident under high contrast situations where young children are initially asked to draw--a request which matches their expectation of the kind of task adults should ask--and where after such a contract has been drawn a new contract requests that they now write. Having made an initial set of decisions, the new request forces their attention to the semantics of the request and allows contrast of the process. It is often during this high-contrast condition that the researcher can also gain insight into when the markings produced under the writing subtask were in fact drawing; that is to say, whether or not the writing contract was negotiated by the child to a drawing contract. The best indication of such is when the movements used in drawing differ from the movements used in writing. By comparison of the child's performance across writing and drawing, movements which might initially be seen as writing can be identified as drawing (see article 5.9).

While not all of the children in our study used the same markings for print--some used an up-and-down linear squiggle, some used a

2.4.1 (Continued)

circular motion, some a dense blob, some mock letters, and others a more representational form--all were systematic in their approach to print. Whatever decisions they had arrived at, they consistently applied these decisions each time they engaged in a writing or a drawing contract.

An analysis of those decisions which the children made proved especially interesting. Generally the children's art was characterized as being global, centralized and connected. Children, prior to the product being particularly representational to the adult eye, usually drew a large figure in the center of the page having a unity or cohesiveness of lines converging about this point. Their writing, on the other hand, was typically linear, spaced, and located off center.

Movements, whether circular or wavy, were less identifiable in and of themselves as either art or drawing. Rather, whatever predominant movement the child had selected as representing writing, an alternative movement was selected to represent drawing. For example if the child used a huge circular motion to placehold his message in art, he used a continuing linear wavy movement when asked to write. Those children who used a wavy movement for art, used a circular linear movement for writing. Hence, while all children did not reach the same decision, they all reached some decision. Further, this decision was both organized and systematic.

Which particular movements the child was likely to select for writing, was also found to be highly predictable. To explain, if one wrote the alphabet in manuscript capital letters the way most parents

2.4.1 (Continued)

2.4.1 Figure 1. Early Writing and Drawing as Systematic and Organized

LETTERS	TYPE
A	= L (Linear)
B	= C (Circular)
C	= C
D	= C
E	= L
F	= L
G	= C
H	= L
I	= L
J	= C
K	= L
L	= L
M	= L
N	= L
O	= C
P	= C
Q	= C
R	= C
S	= C
T	= L
U	= C
V	= L
W	= L
X	= L
Y	= L
Z	= L

EXAMPLE 1

1. J E R R Y

code
↓

2. C L C C L [L = Linear; C = Circular]

↓
equation
↓

3. 2/5 $\left[\frac{\text{\# of linear letters}}{\text{total \# of letters in name}}\right]$

Probability = .40
Since .40 is low, we would expect Jerry to write his name using circular strokes. And such is the case

EXAMPLE 2

1. L A T R I C E

↓

2. L L L C L C L

↓

3. 5/7

↓
Probability = .71
Since .71 is high, we would expect Latrice to write her name using linear strokes. And such is the case

2.4.1 (Continued)

seem to do when their preschoolers request their names in writing, and figured the proportion of linear letters as opposed to circular letters in the child's name as shown in Figure 1, then the resulting equation (# of linear letters/total # of letters in name) gives one a probability of the type of stroke which the child will most likely use in writing (High probability = linear; low probability = circular).

The fact that children are extremely systematic in their decisions as to the formation of print is readily substantiated when one performs this analysis. The probability of guessing which movement--either linear or circular--will be selected when considering all the letters of the child's name was found to be .93. Using just the first letter of the child's name for prediction was found to be almost as reliable (.91). How useful this procedure is for parents and teachers is of course debatable, and it was not our intent to develop this analysis into a testing procedure. In reality it makes little difference which movement is selected or even if this decision rule is not followed by the child. What is of importance, however, is that we come to understand that the decisions which children make in regard to writing are rule governed and reflective of the child's early attempts to make sense of print. Clearly their behavior is far from random. Not only do children have a basis for the decisions they make relative to writing, but by selecting a contrasting movement as dominant for art they once again demonstrate the systematic nature of their thought processes relative to these processes.

2.4.2 CHILDREN'S INITIAL ATTEMPTS AT READING AND WRITING REPRESENT A REAL ACCESS TO LITERACY

There is a tendency to view the set of products produced by children under the task uninterrupted writing as initial attempts at writing, rather than "true" writing. Yet there is little in our data to support such a view. What the data do suggest is that these young written language users made a host of very sensitive literacy decisions. Decisions, we might add, that if made by an adult, would quickly be recognized as literacy.

Children, as young as 3, seem to have a deep-seated understanding of what language is. They intuitively seem to understand that each engagement in the process serves as an opportunity to take social action, mean, and learn.

All of the children in our study knew that some written response was required of our requests to write and draw, and they freely engaged in those processes. They saw writing then as an appropriate social course of action under given conditions. It was a recognized way in which the language contract which we set up could be acted upon.

Secondly, children's markings were purposeful; that is, true attempts to mean. They knew how they wished to respond and the marks which they made were directed to that end. Vygostsky (1979) speaks of this as a monumental moment when the child discovers that meaning precedes marking. Children, he argues, begin by making a mark and once having done so, label it. He conceptualized this process as one of object over meaning $(\frac{\text{object}}{\text{meaning}})$. He contrasts this to what literate adults

2.4.2 (Continued)

do, namely say to themselves, "I'm going to write such-and-such" and then proceed to do so. He conceptualizes this process as one of meaning over object ($\frac{\text{meaning}}{\text{object}}$). When this particular change occurs is not clear, but from our data it becomes clear that children even as young as three had this intent to mean prior to making marks on paper ($\frac{\text{meaning}}{\text{object}}$).

This is not to say that children did not sometimes negotiate their markings once they had been produced. A case in point is Latrice whom we introduced earlier. Latrice initially begins to write an *L* and *I* in response to our request to write her name. Clearly her markings at this point had the semantic intent of placeholding her name. Having fulfilled this contract, so to speak, she begins to draw and, alas, does so over the same area in which she has written her name. Later when asked to read what she has written she says, pointing to the area where her name is written and over which she drew, "and this says Mickey Mouse." The fact that she negotiated her markings after completion of the contract cannot be taken as evidence of a lack of semantic intent, but rather more a reflection of time and the generative process of writing. This, however, brings us to our third point.

Each opportunity with language allows us not only an opportunity to act and mean but also to learn. In writing, for example, the act of having put one idea on paper and then later adding a second idea, allows us to view not only each idea separately but in closer proximity than we may ever have done before mentally. Often from experiences such as

2.4.2 (Continued)

this we see not only new relationships, but we make new insights. Defining writing as a process of putting one's ideas on paper falls far short of an adequate definition, for in a real sense writing is also generative. It is, in fact, this generative aspect of writing which makes the process of writing itself a true language learning event of educational import. Just as the process is generative for us, so too is it for children. Latrice's, "and that's Mickey Mouse," is reflective of this process. Each opportunity to engage in the process was an attempt not only to mean and act but to grow and discover. Children seem to intuit not only what language is but to take free advantage of all it has to offer.

It is important to understand that these actions are not the rudimentary forms of literacy, but are, when viewed as a unit, an impressive and coordinated set of key literacy decisions. When asked to write, children not only responded appropriately by either engaging in the contract or renegotiating it to be one of drawing--a response repertoire which adults also use when not wishing to respond to a particular question--but they did so in a predictable and meaningful manner. Even in such instances where it was obvious that the child was drawing a picture rather than a picture of himself and the researcher asked the child, "Are you making D.J.'s picture?" (meaning a picture of D.J.) the child responded, "Yes, this is D.J.'s picture" (meaning a picture made by D.J.), the reinterpretation fell within logical semantic parameters given the context of the situation.

2.4.2 (Continued)

This coordination of response both pragmatically and semantically is a literacy feat worthy of note. Three and four year olds not only responded to our requests to write and draw with appropriate actions and meanings but, given this particular language setting, took the opportunity to clarify for both us and them the differences between writing and drawing.

Five year olds responded in a similar fashion except that they had by now drawn adult-like arbitrary lines between writing and drawing. While most, when encouraged to continue to write anything else they could write, moved to art or math, this act seemed consciously performed. The five year old knew that such alternate communication system moves were not only semantically viable but socially acceptable. The moves to alternate communicate systems by 5 year olds seemed more planned; more an attempt to avoid writing than to complement it. It is interesting that at the exact point in schools--kindergarten--where much formal effort was devoted to teaching letters and letter sounds--activities designed to clarify language for the child and help him grow--children used negotiation as an escape rather than as an attempt to more fully mean. All 5 year olds in our study made this move in their writing, while only a few 3 and 4 year olds felt the need to do so. Yet we must be impressed with the 5 year old. Faced with a writing task of complexity, and knowing what they don't know, the five year old responds in a socially and semantically acceptable manner.

2.4.2 (Continued)

Six year olds were equally impressive. Given the context of our research--a writing task in a school setting--they responded by playing it safe, only writing words which they thought they were sure they knew and which had previously been the subject of instruction. They were now content to limit what they knew about writing to those things taught.

While such a closing down of the linguistic resources which the children possessed may seem unfortunate from a language learning perspective, it does serve to demonstrate that these language users were extremely literate, sensitive to this particular context of situation and able to come up with a response pattern which honored the constraints they saw operative.

2.4.3 CHILDREN INDIVIDUALLY NEED TO REINVENT THE WRITING SYSTEM FOR THEMSELVES

Written language growth and development is not a simple process of adding acquiring bits of language information. If this were the case development would be linear and straight-forward. Rather, each language user must invent written language for him or herself from the inside-out so to speak.

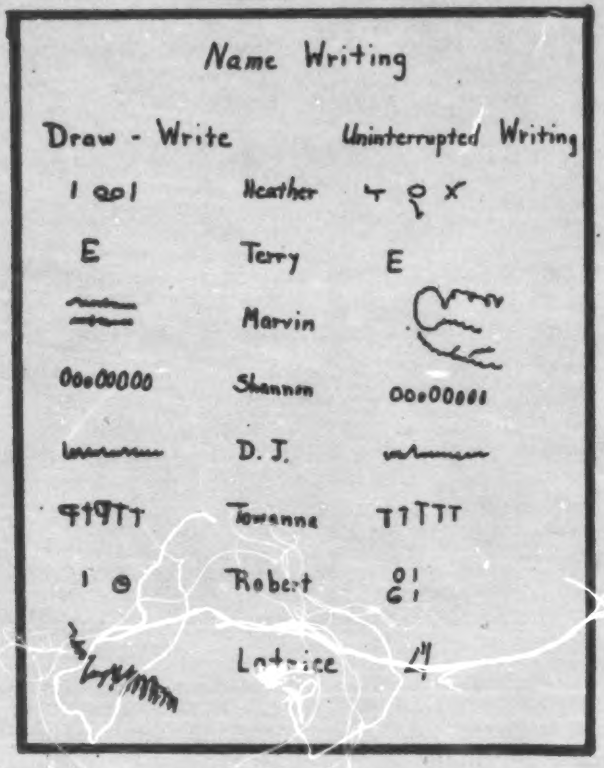
Probably no data better illustrate this fact than the range of written products which we received across age groups. No single individual's work typifies the work of another at that same age. While differences do exist between the written products of 3 and 4 years olds, as opposed to 5 and 6 year olds, these have more to do with motor control than with conventionality or process.

To explain, children at all ages, as has already been demonstrated through our discussion of the decisions of 3 year olds as to what constitutes writing as opposed to art, had developed their own personalized set of written language conventions. All the three-year-olds had a symbol or symbols for representing their name. Figure 1 demonstrates the consistency of form from one writing task to another for this age group.

Conventions, which 3-year-olds and other children in our study developed, acted like any other set of conventions which a society might develop; namely, serving to facilitate meaning access and record past communicative decisions. The fact that this personal set of conventions did not mirror the set of conventions on which our society

2.4.3 (Continued)

2.4.3 Figure 1. Name Writing Across Uninterrupted Writing and Uninterrupted Drawing Tasks (3-Year Olds)


Name Writing
Draw - Write
Uninterrupted Writing
Heather
Terry
Marvin
Shannon
D. J.
Towanna
Robert
Latrice

2.4.3 (Continued)

has agreed, is less important than is the fact that children intuitively understood the problems of moving from speech to writing and the arbitrary nature of the conventions developed. What is particularly interesting, in this regard, is the range of conventions explored by the children. It is as if, among the 48 children studied, every convention that has been adopted by written language users worldwide was being reinvented and tested by this group of very young language users. Some tried writing right-to-left, others bottom to top, and a not surprising majority, given the culture they were in, wrote left-to-right, top-to-bottom. The use of space in relationship to placeholding individual concepts posed difficult problems for these children. Some used space and distance freely about the page, others drew dots between conceptual units, some drew circles around sets of markings, others wrote in columns to preserve order, while still others spaced their concepts using what we would see as the conventional format for this society. All, however, had to grapple with the notion of a word. Since words do not exist in oral language, it should not surprise us that young children too must solve this problem and in so doing explore a range of possibilities.

The symbol system itself proved no less interesting. Children's markings, while having many English language features, ranged from pictorialgraphs to symbolic-like strings.

Equally fascinating was how conventional, in terms of the choices which we as English language users have made, the children's choices

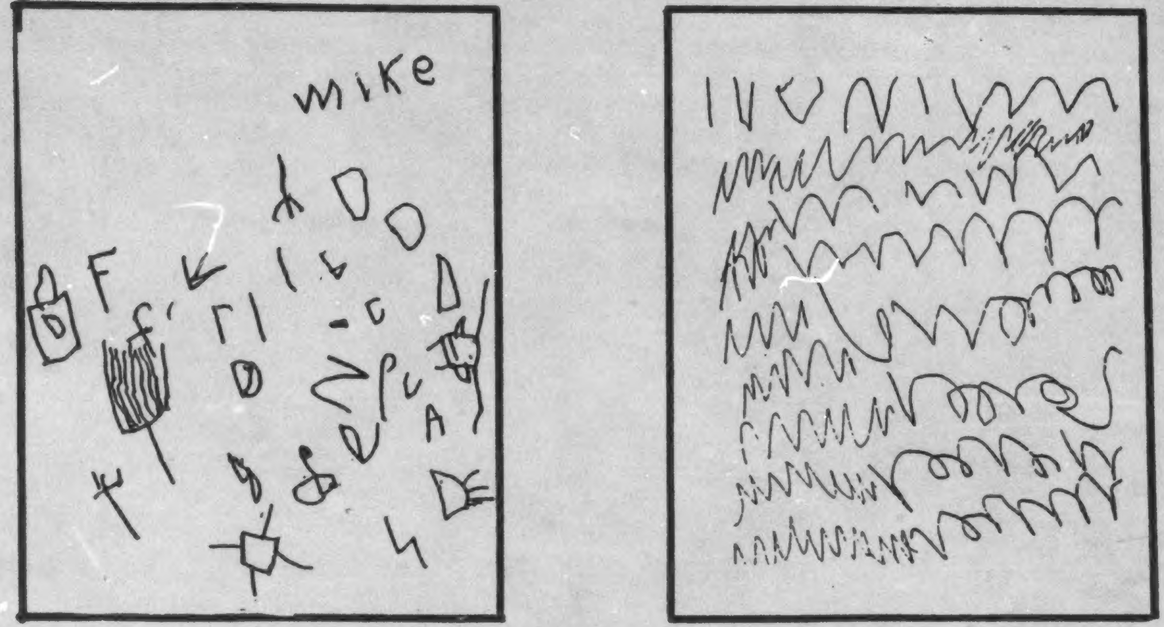
2.4.3 (Continued)

already were by the age of 5. We suspect this reflects not so much capitulation as it does on-going hypothesis testing on the part of the child where decisions reached as a writer are reflected upon as the child engages in discovering how reading works and where all this activity takes place in a supportive written language interpretive community.

While all children had seemingly arrived at this society's selected set of conventions in some area--be it their generalized organizational decisions as to what constitutes art as opposed to writing, or their use of symbols, or their spacing of conceptual units on the page--all were engaged in the creation of personal conventions at some other level. Mike, age 4, was exploring symbolization (Fig. 1), coming to a set of conventional rules which looked decidedly like those many American Indian cultures had arrived at. Dawn, age 4, was exploring how one could placehold longer messages on paper rapidly and in the process seemed to reach many of the decisions which were made by the developers of shorthand. Charvin, age 4, uses each unit on his page to placehold a unit of meaning and seemed unconcerned at this point with the alphabetic principle of language. Alison, age 4, used the letters in her name, only reshuffled, to placehold her story, a coordinated decision which maintains the alphabetic principle but solves the problem that Dawn seemed to want to address. All of these children are 4. Yet, each in their own way is exploring important components of the writing process. They are, in short, inventing the system for themselves

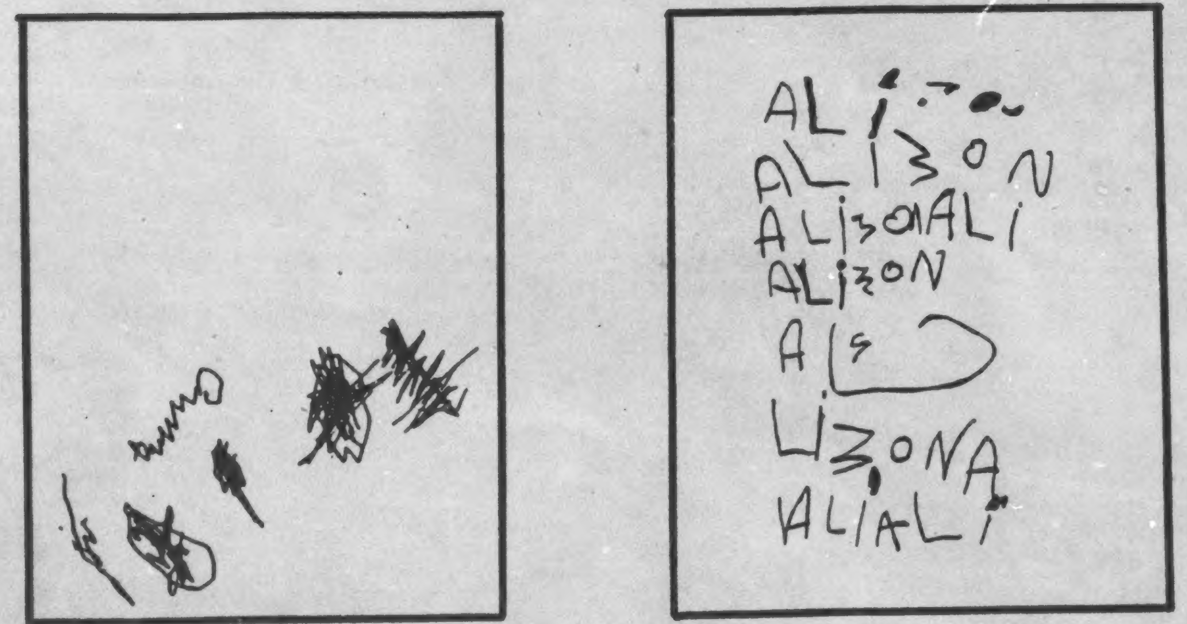
2.4.3 (Continued)

Figure 1. Writing as Systematic and Organized But Not Sequential in Development



Mike (Age 4)

Dawn (Age 4)


ALi
ALI3ON
ALi3OALi
ALi3ON
A L
LI3ONA
ALiALi

Charvin (Age 4)

Alison (Age 4)

2.4.3 (Continued)

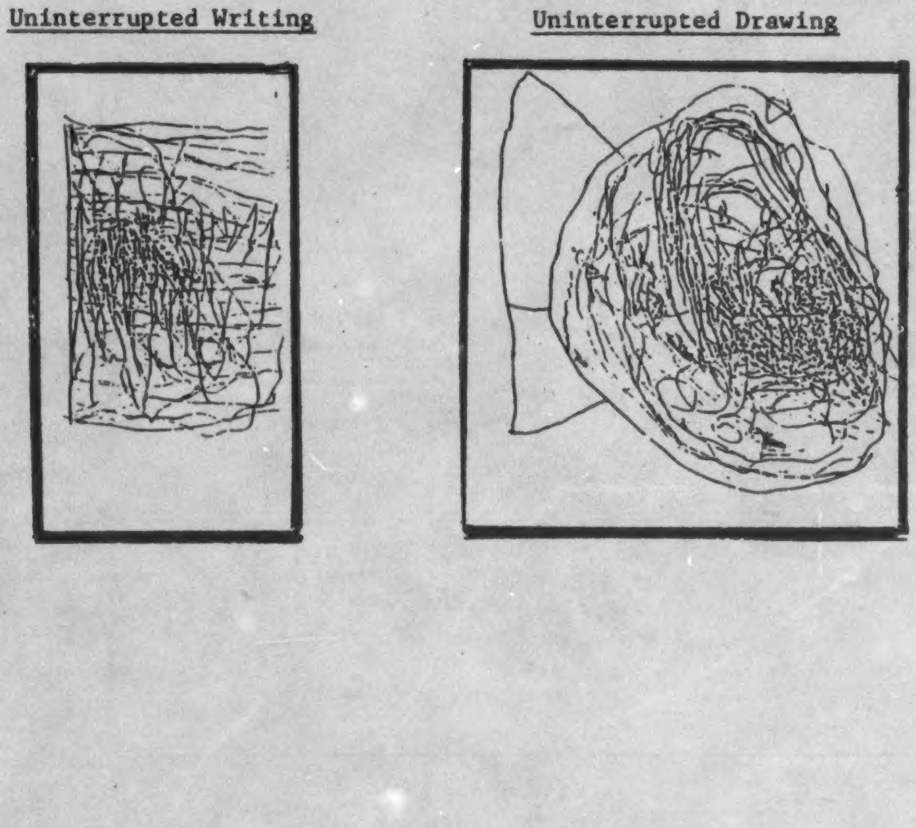
from the inside out. As new hypotheses are tested, old decisions are not only altered, but sometimes set aside. What looks like regression, given a straight-line model of development, represents the on-going process of growth given another theoretical perspective. In this move to a form of literacy recognizable by adult society the child is aided not only by involvement in the writing process but by involvement in the reading process. The child's world is filled with print. The child's multiple engagement of these processes over time causes the child to slip so naturally into literacy that we are often surprised and unable to explain how or when the child began. Growth and development, however, is not only the prerogative of the young; it is the prerogative of every language user. Growth is constant from our first encounter with print through our most recent. The problems we have solved hardly fascinate us. Each of us, like the young children we have studied, push at the frontiers of what we comfortably know. In this sense none of us is totally literate, but only on the way toward literacy. As soon as we think we have said something as brilliantly as it can be said, we raise the challenge, "I'll bet it would be better if I just changed this phrase." It is this push toward literacy involving an ever increasing number of orchestrated decisions which marks growth and development. Attainment, as currently defined, does not exist either for us or for the child.

2.4.4 DESPITE SURFACE STRUCTURE FORM, CHILDREN ARE CONSCIENTIOUS WRITTEN LANGUAGE USERS

There is an unfortunate tendency, given our adult conventional eyes, to view the products which 3, 4, 5, and 6-year olds produce, as reflecting either immature or careless workmanship. When we confuse product with process we fail to note the on-set of literacy and fail to appreciate the real literacy achievements of young children.

In judging Terry's products (Figure 1) from an adult conventional eye, some might call them "scribbles." This is unfortunate, however, as

2.4.4 Figure 1. Uninterrupted Writing and Drawing (Terry, Age 3)



Uninterrupted Writing

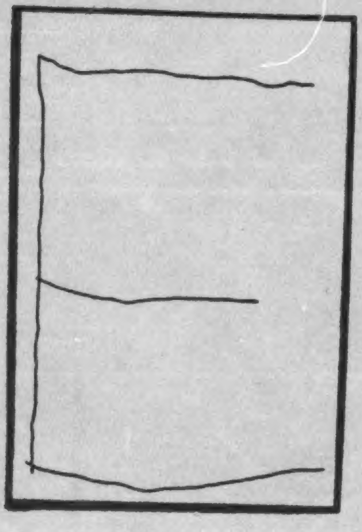
Uninterrupted Drawing

2.4.4 (Continued)

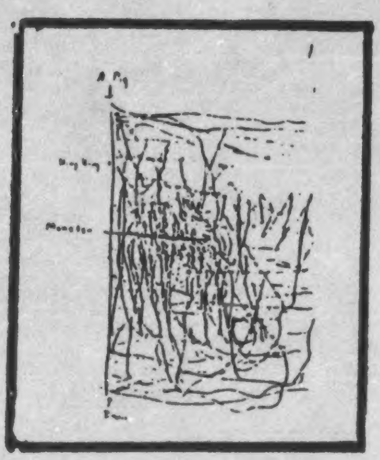
it is demeaning of the importance of these efforts to suggest they are either unorganized or pseudo forms of the true processes as the term "scribble" seems to imply.

The soundness of Terry's literacy decisions become evidence if we but take time to examine the processes involved in the reproduction of these products.

Terry's first four marks formed a perfect E which he labeled his name. (A) Already at age 3, Terry has invented a symbol for his name. We know it serves a consistent signing function as Terry uses it consistently across tasks.



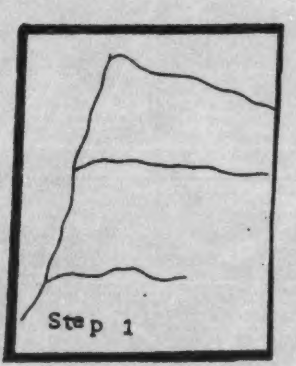
In writing anything else he could write, Terry added a few more lines and continued in this fashion until he finished his work. When asked to read his writing (B), he read "A pig, King Kong, Monster, Down" pointing to the places marked in his writing. Whether these are the meanings Terry intended as he wrote is not



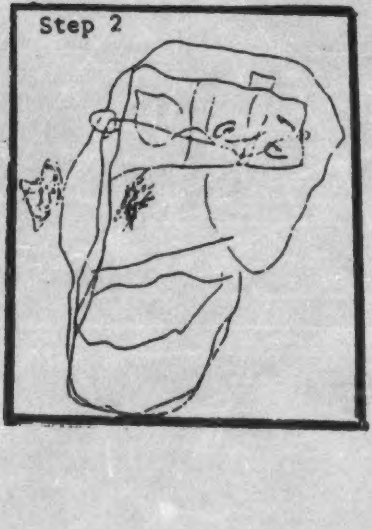
2.4.4 (Continued)

clear. What is clear, however, is Terry's notion that graphic markings are not only things to be read, but a form of social action and the touchstones of text production.

Terry's picture of himself contrasts sharply with his writing. Terry began his self-portrait with the letter E. (C)



Terry's masterpiece evolved from this letter form; yet Terry's decisions here are quite different from those he made during writing. (D)



2.4.4 (Continued)

Terry does differentiate between art and writing. Art for Terry is global and circular and as such contrasts with the linearity of what writing is. The E to the side of his drawing is his name. Art is often thought to develop before writing and many argue that children learn letter forms from their work in art, but Terry helps us to challenge that view. The decisions that Terry has made about writing facilitate his growth and development in art and vice versa. The relationship here is a reciprocal one which when contrasted for the child becomes mutually supportive to written language literacy in the broadest sense. In looking beyond the surface products, then, we see that these are not immature forms of literacy, but real literacy decisions which allow Terry access to the conventional symbolization process of written language.

To consider products as hasty and careless workmanship is another fallacy. Nothing could be further from reality. Child after child took what often seemed an inordinate amount of time to create their products. Terry, for example, took a half hour for producing *each* of his writing and his drawing products! It would be more descriptive to say that his works were thoughtful and meticulous, than it would to consider them either immature or careless.

Children demonstrated other forms of conscientiousness. One of these we termed "knowing one doesn't know." Whether in the midst of writing their names or forming certain letters children often as young as 3 would say, "No," hesitate, and then cross out, proceed

2.4.4 (Continued)

along or change to another communication system. They knew not only what they knew, but what they did not know and needed to work on.

We found this phenomenon particularly interesting in that it flies in the face of current pedagogy, which assumes that corrective feedback must come from an obliging adult; that errors, if not immediately corrected by an outsider, become reinforced habits of some consequence to the acquisition of literacy. Children in our study seemed well aware of their literacy decisions, changed their perceived errors and capably self-selected a set of things upon which they knew they needed work.

3.0 READING ENVIRONMENTAL PRINT: THE CHILD AS INFORMANT

3.1 TASK DESCRIPTION

This task involved showing children 20 items of environmental print in 3 Stages. The environmental print we selected included fast food places, road signs, toys, and food products. Figure 1 lists the actual print items used.

3.1 Figure 1. Environmental Print: Products Used

PRODUCTS	ITEM SHOWN
Dynamints	Full Dynamint container
Kroger Eggs	Empty egg carton
Lego	Full 3" x 6" Lego Box (Police set)
Indianapolis	8" x 10" Color photo of sign without road
For Sale	8" x 10" Color photo of sign without house
McDonald's	Empty McDonald's soft drink cup
Stop	8" x 10" Color photo of sign without road
No Parking This Side	8" x 10" Color photo of sign without road
Jell-O	Full 5" x 5" Strawberry Jell-O Box
Coca-Cola	Empty Coca-Cola Cup
Evel Knievel Chopper	8" x 10" Color photo of box
Crest	Empty 1" x 5" Crest box
Burger Chef	Empty Burger Chef soft drink cup
Wendy's	Empty Wendy's soft drink cup
Toss Across Game	8" x 10" Color photo of Toy Box
U.S. Mail	8" x 10" Color photo of mailbox on sidewalk
Puffs	Full yellow Puffs box
Kroger Milk	Empty half gallon container
Band-Aid	Full 4" x 3½" cardboard box
Kroger Cottage Cheese	Empty 24 oz. container

3.1.1 STAGE 1

In Stage 1 children were shown the actual item of print (i.e., Jell-O on a box of Jell-O) and asked 3 questions:

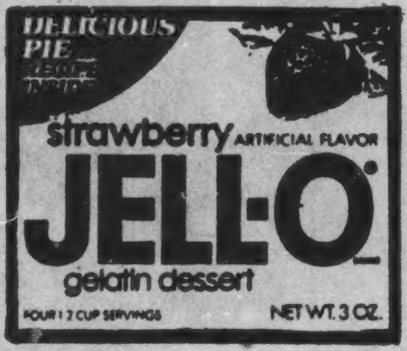
(1) What do you think this says?

(2) Tell me some of the things that help you know what this says.

(3) Tell me some of the things you know about this.

See Figure 1 below for an example of what one instance of environmental print looked like when the real object was used.

3.1.1 Figure 1. Environmental Print: Actual Object Example

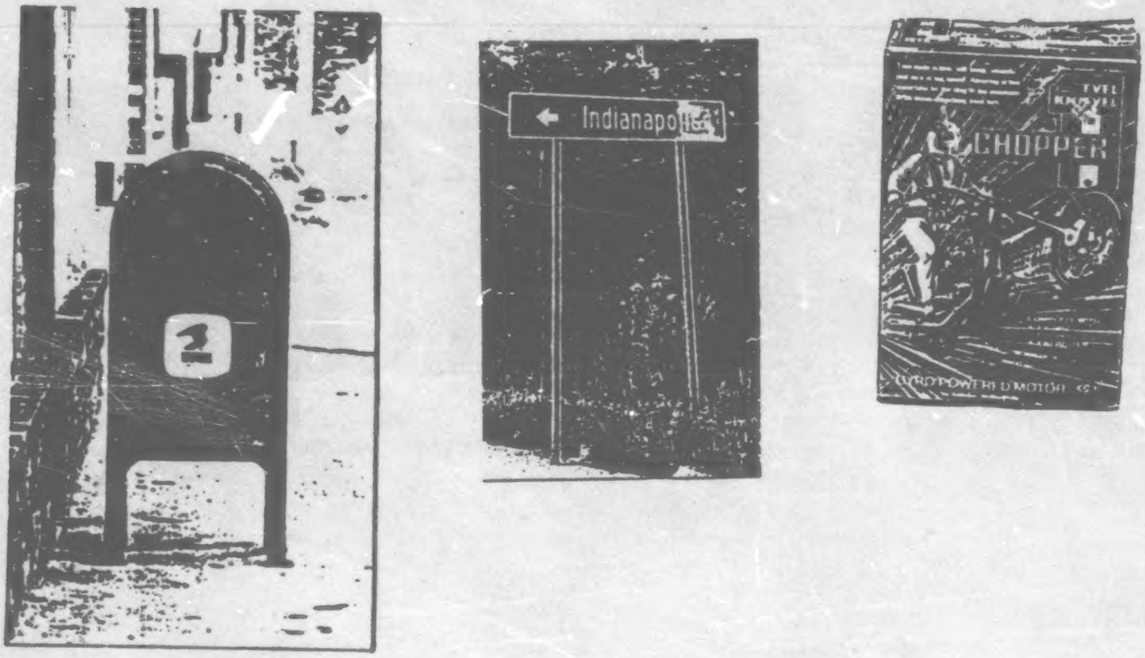

DELICIOUS
PIE
strawberry ARTIFICIAL FLAVOR
JELL-O
gelatin dessert
FOUR 1/2 CUP SERVINGS
NET WT. 3 OZ.

Because of the bulkiness of some environmental print pieces, color photographs of the items were used. Items for which this was true included For Sale (realtor's house sign), U.S. Mail (corner mailbox), No Parking This Side (street sign), Indianapolis (road sign), Toss Across (game box), Evel Kneivel Chopper (toy box) and Stop (street sign). Care

3.1.1 (Continued)

was taken so that the item appeared in a natural setting, but that the relationship of the print to the language user was not suggested. *U.S. Mail*, for example, showed a mailbox by a building, but did not show a person dropping mail into the mailbox (see Figure 2). *Indianapolis* showed a road sign, but not the road. *Evel Kneivel* showed the toy box, but not persons playing with the toy.

3.1.1 Figure 2. Environmental Print: Picture Examples



The order of the items in Stage 1, as in all Stages, was decided by using a table of random numbers. This meant that while the order of

3.1.1 (Continued)

items varied across stages, the order of presentation within a given stage was fixed across children. All children in Stage 1, for example, saw Dynamints first. The same children in Stage 2 saw Jell-O first, and so on. Figure 3 gives the presentation order of environmental print across the 3 stages in this research task.

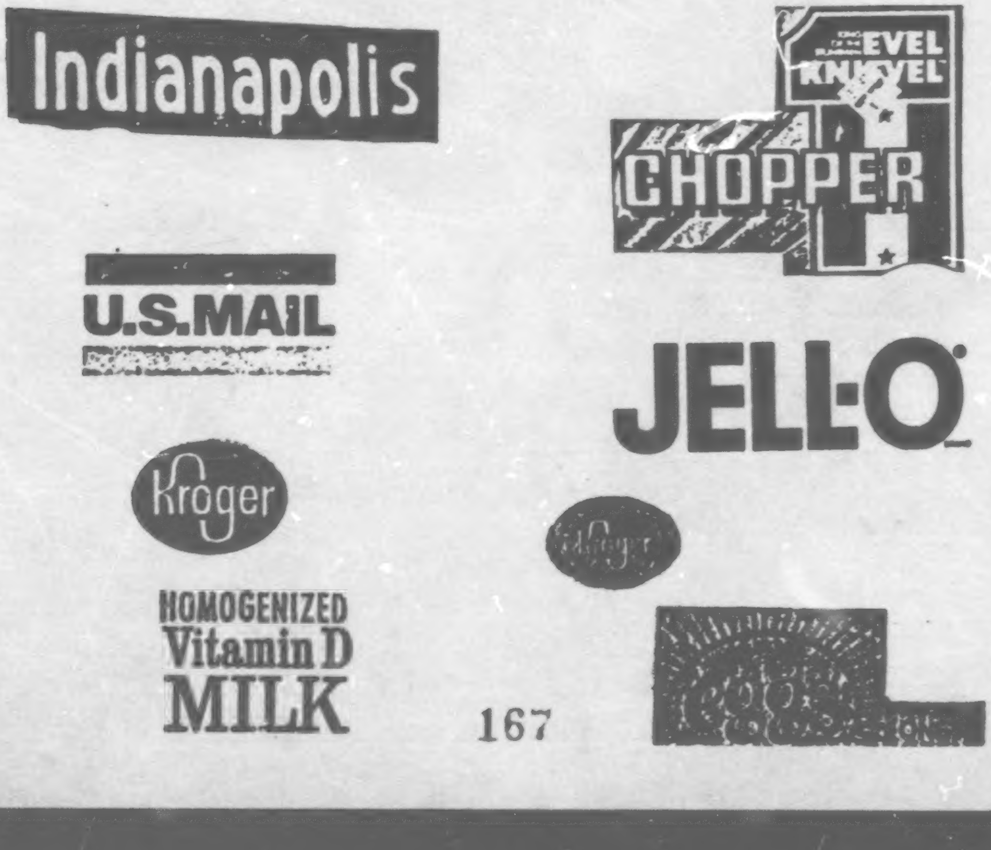
3.1.1 Figure 3. Environmental Print: Order of Presentation

STAGE 1	STAGE 2	STAGE 3
Dynamints	Jell-O	Evel Knievel Chopper
Kroger Eggs	Coca-Cola	Band-Aid
Lego	Stop	No Parking This Side
Indianapolis	Band-Aid	Puffs
For Sale	Toss Across Game	Kroger Cottage Cheese
McDonald's	U.S. Mail	Wendy's
Stop	Kroger Eggs	Kroger Eggs
No Parking This Side	Kroger Milk	Stop
Jell-O	McDonald's	Dynamints
Coca-Cola	Evel Knievel Chopper	Lego
Evel Knievel Chopper	Burger Chef	U.S. Mail
Crest	Kroger Cottage Cheese	Indianapolis
Burger Chef	Wendy's	Toss Across Game
Wendy's	For Sale	Coca-Cola
Toss Across Game	Dynamints	Kroger Milk
U.S. Mail	Puffs	Burger Chef
Puffs	Indianapolis	For Sale
Kroger Milk	Lego	McDonald's
Band-Aid	Crest	Crest
Kroger Cottage Cheese	No Parking This Side	Jell-O

3.1.2 STAGE 2

In Stage 2 children were shown the item's logo which had been extracted from the product such that it retained actual color and print style. In some instances, such as for the road sign *Indianapolis*, this involved just the word against a non-descript green backing (see Figure 1). *U.S. Mail* showed not only this print but the red, white, and blue bands which together constitute the logo. *Jell-O* showed the word Jell-O in its chracteristic red block letters. In other instances it involved the logo and multiple units of language. *Evel Kneivel* showed not only *Chopper* but the #1 which together constitute its logo. *Kroger Eggs* presented a special problem. The final decision was to use a multiple print format which was felt to constitute the logo.

3.1.2 Figure 1. Environmental Print: Stage 2 Examples



3.1.2 (Continued)

Children were asked 2 questions in Stage 2:

(1) What do you think this says?

(2) Tell me some of the things that help you know what this says.

Question 3 was not presented in Stage 2 as this information--the child's perceived relationship to the item--was already available from Stage 1.

3.1.3 STAGE 3

Stage 3 involved showing children each item in mixed primary type on a 3 x 5 card. Only high saliency print was included in this stage. What was *Kroger's*, *Homogenized*, *Vitamin D*, *Milk*, in Stage 2 become *Kroger's Milk* in Stage 3. *McDonald's*, which included the golden arches in Stage 2, became just *McDonald's* in Stage 3.

One question was asked during Stage 3; namely, "What do you think this says?" "Tell me some of the things which help you know what this says?" was not asked as the print setting in Stage 3 provided no alternate information sources other than print upon which children could base their response.

3.2 TASK INTENT

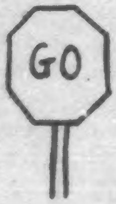
Written language is functional (Goodman & Goodman, 1969). If this were not the case, there would be little explanation for its development and presence in societies. It is this functional dimension of written language which also makes it predictable. We do not encounter Baskin Robbins on a shoe store, nor the sign, Shoe Store on an ice cream parlor. The print we encounter makes sense.

This is, of course, rather convenient for the written language learner. It means that in making sense of one's world, print is not excluded. Given a print laden society such as ours, print is an integral component of what is "out there." In sorting out which is the ice cream parlor and which is the shoe store, print is a distinctive feature as much as the shoes in the window or the pink dots and 31 flavors of Baskin Robbins (Smith, 1978). In this manner, then, distinctive features of print become embedded within a whole world schema (Neisser, 1976).

One need not have a mind set to read print for it to become a distinctive cue or part of a distinctive cue complex. Print is not something laid on a schema, but part and parcel of the schema itself. It is such schemas which guide our perceptions. Think of how disconcerting it would be to encounter the sign in Figure 1 (Burke, 1980). Here, our schema (which includes the print) does not converge with the information we find in the graphic display. Meaning is not predictable.

3.2 (Continued)

3.2 Figure 1. Text in Context: Example



Meaning does not reside in, nor is it signaled by, print and print alone but rather is constructed through our active processing of available cues and cue complexes in the print setting. Print setting is a term, then, which acknowledges the multiple cues to meaning which reside in a natural instance of written language use (Harste, 1980; Harste & Carey, 1980). Cues in isolation and in conjunction with each other form cue complexes which potentially can mean in a semiotic sense. Print setting is a term which highlights the semiotic function within written langauge use and learning (Piaget, 1959; Eco, 1980; Halliday, 1980). The term print setting accents the semiotic potential of any instance of print beyond just the print itself.

The difference between environmental print and book print lies not in the fact that one has more semiotic potential than the other as both contain multiple information sources and hence multiple cues and cue complexes which can, in transaction with the person (Rosenblatt, 1978) sign meaning. The print setting of books provides linguistic (Once upon a time), situational (the book itself as well as the factors surrounding the book), and cultural (including expected patterns of response) cues which together constitute a variable meaning potential

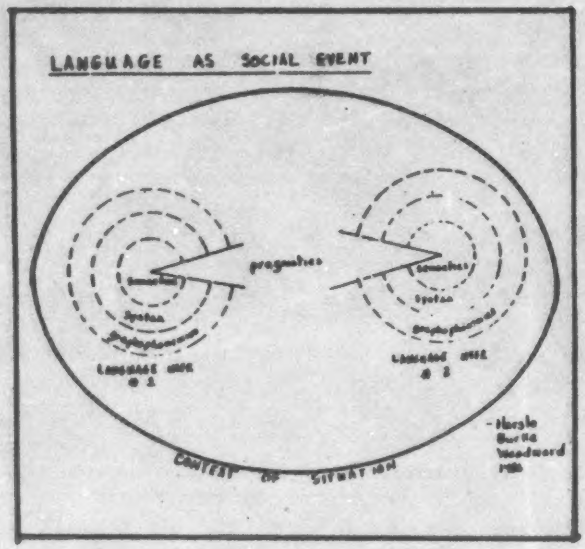
3.2 (Continued)

in transaction with individual members of the culture (Fish, 1980). If one moves to instructional settings this same set of cues--linguistic (controlled vocabulary sentences if you like), situational (the basal reader itself) and cultural (both the classroom culture in terms of role expectancies and the culture more broadly in terms of stance and preferences)--converge to provide a semiotic display which operates to variably define reading for the particular participants in this instance.

In addition to these formulations, a further one, of equal importance, guided our formulation and design of this research task. This was the notion that language--whether oral or written--was inherently social (Halliday, 1975; 1979; 1980). Embodied in the notion of language as social event is the notion that the very purpose, the very function of language is communication. Figure 2 is designed to graphically capture some of this complexity. Inherent in this visual is the notion of the interdependency between language users in a language event. In order to understand the language of one user, one needs to do so in light of one's own language. Pragmatics is defined as the operationalization of the set of social rules which govern language in a particular setting or context of situation (Bates, 1978). Pragmatics is truly a fourth system of language. It is that system which binds language users together and its operation permits the language users involved to determine the nature of the communication contract in process (Searle, 1979; Grice, 1969).

3.2 (Continued)

3.2 Figure 2. Language as Social Event


LANGUAGE AS SOCIAL EVENT
pragmatics
semantics
syntax
graphophonemics
LANGUAGE USER #1
semantics
syntax
graphophonemics
LANGUAGE USER #2
CONTEXT OF SITUATION
-Harste
Burke
Woodward

It is the interaction of language users in a language event which establishes the register of the event (Hymes, 1922; Halliday & Hasan, 1980). Register is not something totally specified by context of situation (Hasan, 1980), but rather evolves during the languaging process (Cicourel, 1976; Corsaro, 1980). What something means, then, depends on the evolving constraints which are set up by language users in a particular context of situation. It is for this reason that ripping language out of its context often makes it appear to mean something different from what it meant in that context. It is for this reason that any instance of written language use and learning is best viewed as the orchectration of a complex social and semiotic event.

3.2 (Continued)

This later statement, of course, unites the two arguments being made and thus establishes a framework for viewing the rational behind this research task. By using a controlled and known print setting, varied systematically across three stages, study of this semiotic potential and social event was made possible.

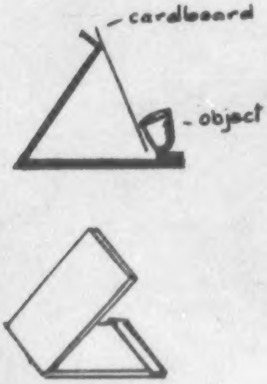
In many ways Stage 1 is the only true reading setting in this research task. Stages 2 and 3 not only systematically eliminate important cue systems but important signing potentialities between and among those cue systems which typically are available to readers. Since real reading in natural settings provides multimodal cues to meaning, Stages 2 and 3 destroy these natural conditions and in so doing distort the true contribution which any cue system (both those absent and those present) makes to the reading act. Many persons see Stage 3 ac a check on "real reading." This is misguided as it fails to recognize not only the complexity of the cue systems of literacy but the semiotic function, potential, and support which such complexity provides for literacy use.

3.3 TASK ADMINISTRATION

The Environmental Print Task was administered to children individually over a 3-day period. Stage 1 was administered on Day 1; Stage 2 on Day 2; Stage 3 on Day 3. If illness or absence interrupted this schedule, as it did for Natasha (1 day), Eugene (2 days), Bradyce (2 days) and Nathan (2 days), the Task was picked up where it was left off. One subject, Towanna (Age 4), was dropped from the sample and replaced with Kibi (Age 4), as her absence (3 days) would have extended videotaping of her performance on Stage 3 to the next week. All videotaping was done using two remote control cameras and a blender which allows the researcher to select which image is to be recorded.

Products in Stage 1 were displayed by setting the object or picture against a home-made holder (Figure 1). This permitted a

3.3 Figure 1. Task Administration: Stage 1

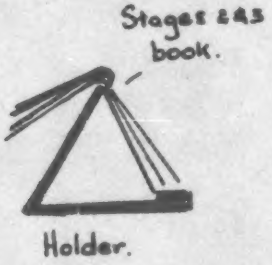


3.3 (Continued)

location upon which to initially focus the camera (over the shoulder of the child) and which gave a clear picture of the print setting being shown. A second camera photographed the child's face in relationship to the object, using a side angle shot.

For purposes of administration, the 4" x 6" or 3" x 5" cards containing the print items in Stages 2 and 3 were mounted on 8" x 11½" pieces of cardboard and arranged in 3-ring notebooks. Stages 2 and 3 were videotaped with the holder used in Stage 1 now acting as a prop for the 3-ring notebook (Figure 2).

3.3 Figure 2. Task Administration: Stages 2 & 3



Although both the researcher administering the task and the researcher operating the television blender had cards showing the order of product presentation for each stage--to catch omissions or the turning of 2 pages at once--13 items of missing data were found during videotape analysis. Given 20 products by each of 3 stages for 48 children, or 2880 responses, this number does not appear serious. It

3.3 (Continued)

is, however, unfortunate and rather unbelievable, given what we thought were elaborate steps to guard against such occurrences. If the omission of an item was noted during videotaping, that item was then picked up at the end of the particular stage in question.

3.4 DATA REDUCTION AND ANALYSIS

Videotape protocol data were transcribed verbatim onto 8½" x 16" legal sized paper set up particularly for this purpose. See Figure 1 for an example of how data looked in this form. Figure 2 lists conventions followed in transcription of the data from videotapes.

After initial transcription, all videotapes were rechecked by a member of the research team. Conflicts were resolved by a third member of the team. Once the videotape had been transcribed and checked, the written protocol forms were marked "Official Copy." Data transcription on this task took approximately 8 hours per child.

Because Task 1 in its three stages had been used in a previous study by the authors, some 1200 responses were available for us in the development of a coding taxonomy. Using the existing videotape protocols (20 children x 3 stages = 60 protocols) and some 1200 responses which these protocols generated to each question, a set of categories was developed from the data. These categories mapped not only response characteristics, but characteristics of the print setting itself. Figure 3 provides a short form of the taxonomy and its coding categories.

Development of the coding taxonomy took place over a five month period. An expanded form of the taxonomy including definitions and examples was developed during this period (see Section 4.0). Work on the taxonomy was considered complete when enough examples had been identified so that interrater reliability could be maintained at .80 or above.

3.4 **Figure 1. Environmental Print: Data Transcription Example**

Official Copy ____
Field Notes ____
Transcriber Grafton
Checker GF.

CHILD'S REACTION TO PRINT IN SITUATIONAL CONTEXTS

STAGE 1 PAGE 1

Pupil's Name TASHA Age 5 Sex F S.E.S. MSES Race B
Study INDPS Subject # 49 Videotape # 1 of 1 Footage # 220-454.
Site ____ Date ____

	Response Time	What do you think this says?	What things do you see that help you know what this says?	Tell me some of the things you know about this	Comments
1. DYNAMINTS		candy	They good	party	
2. KROGER EGGS		eggs	superbag	NR	
3. LEGO		car	a game	toys	
4. BLOOMINGTON/ INDIANAPOLIS		sign	My mamma says sign	tree	
5. FOR SALE		Neller	W	Points to individual letters in MORROW then BILL and names them) W-N-B-C-W	proper name · Neller.
6. McDONALD'S		1.1 cup	1.2 gets you water	1.3 (picks up cup) McDonald's cup	
7. STOP		(P to S in STOP) e	(P to T in STOP) a one	(P to O and P) —, one	It looks as if she is tracing the linear portions of the letters. 'T' and 'P' and calling them one.
8. NO PARKING THIS SIDE		1.1 b 2.1 a car, my mommy car. Her working (points to car)	car	Points to car) mommy car	
9. JELL-O	PP	1.1 a ball [what?] 2.2 buy shick	2.1 bye-bye shick	Points to strawberry apple-grape) (Puts cup on head)	
10. COCA-COLA		cup	pop		

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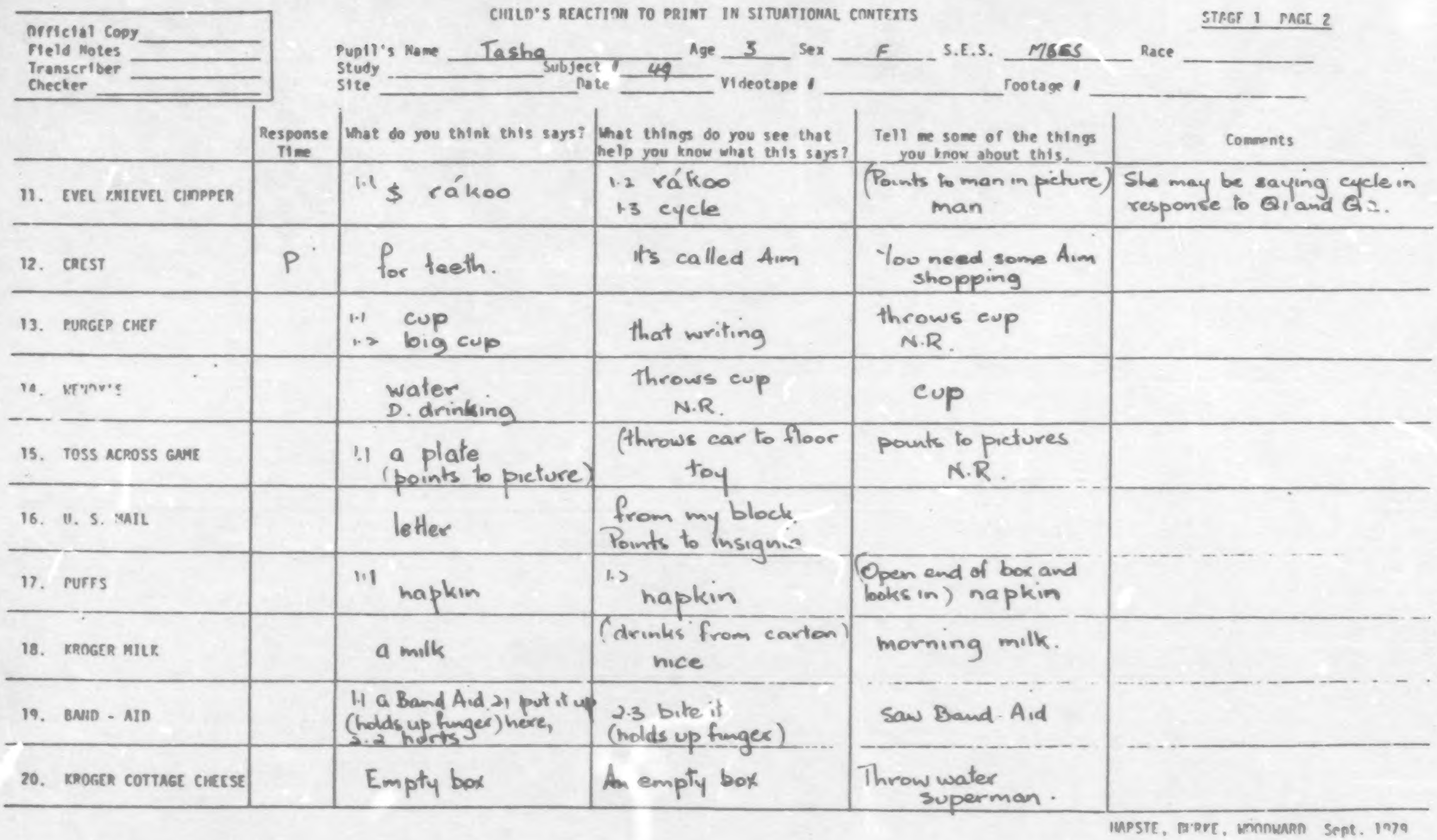
3.4 Figure 1. Environmental Print: Data Transcription Example



Official Copy ____________
Field Notes ____________
Transcriber ____________
Checker ____________

CHILD'S REACTION TO PRINT IN SITUATIONAL CONTEXTS

STAGE 1 PAGE 2

Pupil's Name Tasha Age 3 Sex F S.E.S. MBES Race ________
Study ________ Subject # 49
Site ________ Date ________ Videotape # ________ Footage # ________

	Response Time	What do you think this says?	What things do you see that help you know what this says?	Tell me some of the things you know about this.	Comments
11. EVEL KNIEVEL CHOPPER		1.1 $ rákoo	1.2 rákoo 1.3 cycle	(Points to man in picture) man	She may be saying cycle in response to Q1 and Q2.
12. CREST	P	for teeth.	It's called Aim	You need some Aim shopping	
13. BURGER CHEF		1.1 cup 1.2 big cup	that writing	throws cup N.R.	
14. WENDY'S		water D. drinking	Throws cup N.R.	cup	
15. TOSS ACROSS GAME		1.1 a plate (points to picture)	(throws car to floor toy	points to pictures N.R.	
16. U. S. MAIL		letter	from my block. Points to insignia		
17. PUFFS		1.1 napkin	1.2 napkin	(Open end of box and looks in) napkin	
18. KROGER MILK		a milk	(drinks from carton) nice	morning milk.	
19. BAND - AID		1.1 a Band Aid 2.1 put it up (holds up finger) here, 2.2 hurts	2.3 bite it (holds up finger)	Saw Band-Aid	
20. KROGER COTTAGE CHEESE		Empty box	An empty box	Throw water superman.	

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3.4 Figure 2. Transcribing Procedures for Environmental Print Task

GENERAL PROCEDURES:

1. Record in pen all information concerning subject and study identification. Record in pencil all data.
2. Destroy all field notes when official copy is complete.
3. Print.
4. Multiple responses should be placed in box from top to bottom and numbered. When a response to Q#1 comes following Q#2 or 3, it should be placed in the box for the question being asked and numbered as an additional response to Q#1 (i.e., 1.4).
5. Comments: (a) generalizations across responses
   (b) clarifications or interpretations of responses

CODINGS:

P = pause

PP = prolonged pause

NR = no verbal response from subject

DK = subject's verbal indication that item is unknown/unrecognized

D = dramatizing

P = subject points to text

OMIT = Q not asked

... = partial structure

[ ] = researcher's words

( ) = subject's non-verbal communication

* = researcher prompt (restatement of research question)

_____ = researcher can not interpret subject's response

$ = sounds like (used only in the response to Q1)

3.4 Figure 3. Environmental Print Taxonomy: Short Form

1.0 READER COMMUNICATION DECISION

.1 No Response
.2 Attempts to Invalidate Contract
.3 Don't Know
.4 Symbol Focus: Naming/Sounding Out
.5 Pseudo-Reading
.6 Renegotiates Communication Contract
.7 Maintains Communication Contract

2.0 RESPONSE TIME

(Not coded when C1 is .1)
.1 Immediate
.2 Pause
.3 Prolonged Pause

3.0 SYNTACTIC CHARACTERISTICS OF TEXT

.1 Smaller Than Word
.2 Word
.3 Phrase or Clause Level Unit
.4 Multiple Phrase or Clause Level Units

4.0 SYNTACTIC CHARACTERISTICS OF RESPONSE

(Code when C1 is .7)
.1 Smaller Than Word
.2 Word
.3 Phrase or Clause Level Unit
.4 Multiple Phrase or Clause Level Units

5.0 GRAPHIC INVOLVEMENT

(Code when C1 is .7)
.1 Unavailable in Text
.2 Minimal Text Signal
.3 Available in Text
.4 Mixed Response

6.0 RESPONSE EVOLUTION

(Code when C1 is .6 or .7)
.1 No Evolution Evident
.2 Evolution Evident - Single Communication Response Category
.3 Evolution Evident - Multiple Communication Response Category

7.0 SEMANTIC FEATURES - PRINT SETTING

.1 Contextual Description
.2 Functional Description
.3 Related Concept
.4 Referent Identification
.5 Naming
.6 Locative or Attributinal Focus
.7 Chaining

8.0 SEMANTIC FEATURES - RESPONSE

(Code when C1 is .7)
.1 Contextual Description
.2 Functional Description
.3 Related Concept
.4 Referent Identification
.5 Naming
.6 Locative or Attributinal Focus
.7 Chaining
.8 No Apparent Semantic Intent

9.0 SEMANTIC EXPANSION ACROSS QUESTIONS

(CODE ONLY FOR STAGE 1)
.1 No Apparent Semantic Base
.2 Generation
.3 Maintenance
.4 Expansion

10.0 AVAILABLE INFORMATION SOURCES - PRINT SETTING

(CODE ONLY FOR STAGE 1)
.1 Print
.2 Numbers
.3 Pictures
.4 Graphic Design
.5 Color
.6 Shape
.7 Situational Context

11.0 PERCEIVED/DEMONSTRATED INFORMATION SOURCES - LANGUAGE USER

(CODE ONLY FOR STAGE 1)
.1 Print
.2 Numbers
.3 Pictures
.4 Graphic Design
.5 Color
.6 Shape
.7 Situational Context
.8 Personal Experience
.9 Non-Discriminated Response

12.0 USES LANGUAGE ABOUT LANGUAGE

.1 Yes

3.4 (Continued)

Once this level was reached for each subcategory in the taxonomy, an official interrater reliability coefficient was calculated. This reliability check used a random sample of 16 subjects (33 percent of the sample). Interrater reliability figures were computed by dividing the number of times there was agreement by the total number of times an item could have been coded (see Figure 4).

3.4 **Figure 4. Environmental Print Taxonomy: Interrater Reliability**

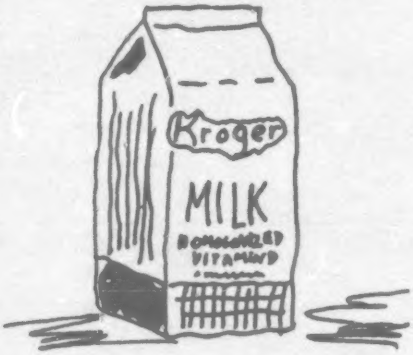
Taxonomic Categories Subject Number	1.0 Reader Comm. Decision	2.0 Responses Time	4.0 Syntactic Charac-teristic-Responses	5.0 Graphic Involve-ment	6.0 Response Eval.	8.0 Semantic Features of Resp.	9.0 Semantic Expansion	11.0 Perceived Demon.Inf. Sources	12.0 Uses Lang. About Language	$\bar{X}$
#64	1.0	1.0	1.0	1.0	1.0	.89	1.0	.95	1.0	.98
#42	1.0	1.0	1.0	1.0	1.0	.99	1.0	.97	.90	.98
#21	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.98	1.0	.99
#60	.90	.95	1.0	1.0	1.0	.98	1.0	.98	1.0	.98
#47	.95	1.0	1.0	.95	1.0	.97	1.0	.99	1.0	.98
#61	.95	1.0	.95	.95	1.0	.99	1.0	.97	1.0	.98
#34	1.0	1.0	.95	1.0	.95	.98	.95	.98	1.0	.98
#36	1.0	1.0	1.0	1.0	1.0	.99	1.0	.99	1.0	.99
#23	.95	1.0	.95	.90	.95	.97	.95	1.0	.80	.94
#28	.90	1.0	1.0	1.0	1.0	1.0	1.0	.98	1.0	.99
#24	.90	1.0	.90	.85	1.0	.98	1.0	1.0	1.0	.96
#39	1.0	1.0	1.0	1.0	1.0	1.0	1.0	.98	1.0	.99
#67	.95	1.0	1.0	1.0	.95	.96	1.0	.98	.75	.95
#68	.95	1.0	1.0	.95	1.0	.96	.90	.98	.95	.97
#40	.95	1.0	.90	1.0	.95	.94	1.0	.97	1.0	.97
#27	1.0	1.0	1.0	.95	1.0	.94	1.0	.99	1.0	.99
	.96	.99	.98	.97	.99	.97	.99	.98	.96	

3.5 KEY FINDINGS

3.5.1 PRAGMATIC INVOLVEMENT

Reader Communication Decisions. All responses are not equal. If one, for example, looks at the list of responses which we received to Kroger Milk (see Figure 1), it becomes readily apparent that responses differ--syntactically, semantically, and pragmatically. While "Milk," "Kroger," and "Kroger's" are responses which maintain the communication contract--that is, answer the question, "What do you think this says?", other responses reflect negotiation of the initial contract.

3.5.1 Figure 1. Environmental Print Responses: Kroger Milk

Print Setting	Responses
	Some milk goes in there Milk Milk Milk Milk Milk Milk A milk box Box that holds milk in it Milk Milk Milk Kroger Milk Milk A milk can Milk Milk Milk Kroger's

3.5.1 (Continued)

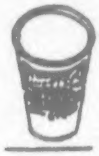
"Some milk goes in there" is a response to questions like, "What goes in there?", "What is this thing used for?", or "What do we do with it?", but not a response to the question, "What do you think this says?" The child's response, "Some milk goes in there," tells us, then, that he has negotiated the communication contract; that is, answered a different question. Similarly, "A milk box," "A milk can," and "A box that holds milk in it," are responses to the question, "What is this?", rather than to the question asked. These responses too reflect a negotiated contract.

While some may argue that the child may think that the print on a Kroger's milk carton says "A milk can," and hence the response maintains the communication contract, this argument seems faulty not only pragmatically (in that it's a better answer to another question), but syntactically (in that the inclusion of a noun marker signals reference to the item not its name). Where we had a multiplicity of such evidence, typically a pragmatic signal which also reflected itself syntactically, our decision was to code the response as negotiated. While we are sure we made some errors using this decision rule, clearly our errors were less than had we ignored what we knew about language and how it works. We do, however, in taking this position, raise an important issue for the profession. The position we take is one which says that before one can accept a given response one must determine whether pragmatically it reflects a maintenance of the communication contract. We further hold that to the extent that this issue has been ignored or sidestepped in language research, results reported are circumspect.

3.5.1 (Continued)

Children's responses to environmental print are, however, even more complex than the discussion so far would suggest. A more complex case in point involves the responses which we received to Wendy's (see Figure 2).

3.5.1 Figure 2. Environmental Print Responses: Wendy's

Print Setting	Responses
	A Wendy's cup
	No Response
	Milk Shake
	Wendy's
	Don't Know
	No Response
	Wendy's
	Burger Queen
	I can't read that
	$ Miz
	Wendy's
	Wendy's Hamburgers
	Water
	Wendy's
	Wendy's
	Arby's
	Wendy's
	Wendy's

Of the list of responses above the following are all responses which maintain the communication contract; that is, answer the question, "What do you think this says?"

3.5.1 (Continued)

Milk Shake
Wendy's
Wendy's
Burger Queen
Wendy's
Wendy's Hamburger
Water
Wendy's
Wendy's
Wendy's
Arby's
Wendy's
Wendy's

That, of course, leaves two No Responses, two Don't Knows, one "I can't read that," one "$ Miz," and one "A Wendy's cup."

We can classify the response "A Wendy's cup" by using the decision rule we have established for negotiation (as being an answer to the question "What is this?", rather than as being an answer to the question posed). Don't Know is a response which maintains the contract, but which simply denies the assumption inherent in the question that the child knows what it says. Children, in saying "I don't know," are in fact telling us that after having reviewed the data available they know they don't know. In short they are saying that what they know doesn't correspond to what cues they see as available in this instance of print.

No Response does not tell us the same thing as Don't Know. No Response tells us that the child was still searching for a response when we moved to our next question. As such children may believe they know and are simply continuing to search for the right information, or they may, in fact, be in process; continuing to test hypotheses and implicitly rejecting them. All we know from a No Response is that the

3.5.1 (Continued)

researcher allowed what was considered to be an adequate response time, and that given this amount of time, the child made no linguistic response. But it is important to realize that the decision in items coded No Response was taken from the child.

Don't Knows and No Responses tell us different things. Here it seems to us we raise an important issue for the profession, as often researchers treat Don't Knows and No Responses as a single class of phenomena. From a processing perspective such a decision is indefensible. In the one instance we have the child's decision after engagement in the process; in the other, we have the researcher's decision after allowing time for engagement; but no linguistic evidence of whether or not that engagement took place.

"$ Miz" is a reading like response, but like "A Wendy's cup," answers a question other than the one posed. In this instance the child is trying to sound out the word. This response reflects a focus not on what it says but on the symbols and how one blends them together. This symbol focus is also evident when children spell the word. These are, in one sense, then, special instances of negotiation. Rather than answer the question asked, children's responses are better seen as answers to questions such as "How do you sound this word out?", "How do you spell this word?" or "Name some of the letters you see in this print setting." Because they reflect instructionally induced ways in which a reading contract is often taught to be negotiated, separating them out for special study is of importance. As such, these forms of

3.5.1 (Continued)

negotiation contrast sharply with other forms of negotiation which are natural strategies which we all employ when we encounter questions we do not wish to answer.

"I can't even read that," is an indirect speech act denying the validity of the request to read. The child is in effect attempting to invalidate the contract, saying in effect, "You shouldn't have asked me to do that as I can't."

What is particularly interesting about the taxonomy which we have developed to classify responses as to the reader's communication decision is that with the addition of one more category, we can code all of the 2880 responses which we received to Task 1 from the children in our sample. This category, Pseudo-Reading, is a reading-like response which is used repeatedly without regard for semantic intent. It represents a strange response set; one we have found which can be induced by systematically depriving language users of natural available information sources in a print setting. This response set rarely, if ever, occurs in natural written language settings. It is the special case of the child in Stage 3 who responds "pop," "pop," "pop" to each item of print shown.

With these seven categories children's responses can be classified pragmatically as to their communication decision. This pragmatic decision is important, however, because it is clearly inappropriate to ask certain questions of the response if the communication contract is not maintained.

3.5.1 (Continued)

Equally important, it seems to us, is the insight that initiate written language users, like proficient written language users, have options available to them as to engagement. No child in our study simply elected one option and stuck with it. Children are pragmatically very aware (see Figure 3). So much so that 67% of all responses maintain the communication contract and virtually all fall within the range of options adults use in response to a question. That is, sometimes adults, too, refuse to respond, attempt to invalidate the contract, negotiate the communication contract (that is, answer a related but different question), but most often, they maintain.

3.5.1 Figure 3. Reader Communication Decision: Descriptive Data

Category Level	N	%
No Response	56	5.8
Attempts to Invalidate Contract	1	.1
Don't Know	56	5.8
Symbol Focus	52	5.2
Pseudo Reading	7	.7
Negotiates Communication Contract	142	14.8
Maintains Contact	644	67.1
Missing Data	4	.4
	960	100.0%

3.5.1 (Continued)

Response Evolution. Any question, including our question, "What do you think this says?", provides the responder with not only the opportunity to maintain a previous response, but revise it. In terms of our reader communication decision categories the language user has essentially two choices: to stick with the original response or expand upon the original response. Expansion can be of two types: within a communication response category like Maintenance (1.7), where initially the responder says "Motorcycle" and then expands this response to "Evel Knievel Motorcycle"; or between communication response categories, where the child initially negotiates the question and responds "Drink it," but then decides to maintain the contract and respond "Coke."

The coding categories developed to record such patterns of response maintenance and shifts were: (1) No Evolution Evident; (2) Evolution Evident - Single Communication Response Category; (3) Evolution Evident - Multiple Communication Response Category. It was assumed that information of this sort would help us understand the degree to which 3, 4, 5, and 6-year old children control and understand the pragmatic constraints of written language use. In this regard, we also wanted to study pragmatic control in relationship to the amount of information available in the print setting, assuming that the more information sources available the greater the likelihood of response evolution (more frequent coding of categories 2 and 3).

Figure 4 shows this to be the case. More instances of evolution occurs in Stage 1 than in Stages 2 and 3 (10% in Stage 1; 4.8% in Stage 3).

3.5.1 (Continued)

3.5.1 Figure 4. Response Evolution by Stages

Category Label	Stage 1		Stage 2		Stage 3	
	N	%	N	%	N	%
1. No Evolution Evident	697	88.9	637	93.5	280	95.2
2. Evolution Evident - Single	40	5.1	15	2.2	5	1.7
3. Evolution Evident - Multiple	47	4.9	29	4.3	9	3.1

While this trend is evident, the fact remains that the majority of responses at all stages show no evidence of evolution (88.9% in Stage 1; 93.5% in Stage 2; 95.2% in Stage 3). This data is far more interesting. It suggests that 3, 4, 5, and 6-year olds rapidly identify and process all information they feel important to come to a communication decision. Having once done this, simply being present at the social event or looking longer at the data available doesn't very often lead them to read new demands and revise their pragmatic decision. The young child seems to know that he has an inherent right as a language user to negotiate some communication contracts. Children as well as ourselves exercise this right and children like ourselves seem quite comfortable having done so when the conditions seem right to us. That this pattern is not a function of age, race, sex or socioeconomic status is evident in the figures which follow.

3.5.1 (Continued)

3.5.1 Figure 5. Response Evolution by Age

Category Label	Age 3 1	2	3	Age 4 1	2	3
1. No Evolution Evident	88.8	92.5	100	81.8	90.3	95.1
2. Evolution Evident - Single	4.8	.8	0.0	5.5	2.3	1.6
3. Evolution Evident - Multiple	6.4	6.7	0.0	12.7	7.4	3.3

	Age 5 1	2	3	Age 6 1	2	3
1. No Evolution Evident	93.3	93.7	95.4	91.0	96.7	94.8
2. Evolution Evident - Single	3.6	4.0	1.5	6.3	1.4	2.0
3. Evolution Evident - Multiple	3.1	2.3	3.1	2.7	1.9	3.3

3.5.1 Figure 6. Response Evolution by Race

Category Label	Stage 1 B	W	Stage 2 B	W	Stage 3 B	W
1. No Evolution Evident	87.0	90.9	91.9	95.2	97.5	92.6
2. Evolution Evident - Single	6.1	4.0	2.6	1.8	1.3	2.2
3. Evolution Evident - Multiple	6.8	5.1	5.5	3.0	1.3	5.1

3.5.1 (Continued)

3.5.1 Figure 7. Response Evolution by Sex

Category Label	Stage 1		Stage 2		Stage 3	
	M	F	M	F	M	F
1. No Evolution Evident	87.7	90.1	93.1	94.2	93.5	96.5
2. Evolution Evident - Single	6.3	3.9	2.6	1.7	2.4	1.2
3. Evolution Evident - Multiple	6.0	6.0	4.4	4.1	4.0	2.4

3.5.1 Figure 8. Response Evolution by SES

Category Label	Stage 1		Stage 2		Stage 3	
	L	M	L	M	L	M
1. No Evolution Evident	86.0	91.5	93.8	93.3	95.7	94.9
2. Evolution Evident - Single	5.4	4.9	2.6	1.9	1.7	1.7
3. Evolution Evident - Multiple	8.6	3.6	3.6	4.8	2.6	3.4

Reader Communication Decision by Stages. When one looks at reader communication decisions by stages (see Figure 9) what one finds is that the more atypical the print setting the more atypical the response. If you want a written language user to look as if he doesn't know how to respond to a written language setting, the more abstract you make the written language setting, the greater the possibility that this will be the case.

3.5.1 (Continued)

3.5.1 Figure 9. Reader Communication Decision by Stages

	Stage 1		Stage 2		Stage 3	
Category Label	N	%	N	%	N	%
1. No Response	56	5.8	50	5.2	33	3.4
2. Invalidate	1	.1	0	0.0	0	0.0
3. Don't Know	56	5.8	83	8.6	101	10.5
4. Symbol Focus	50	5.2	58	6.0	148	15.4
5. Pseudo Reading	7	.7	82	8.5	367	38.2
6. Neg Contract	142	14.8	58	6.0	16	1.7
7. Maintain Con	644	67.1	623	64.9	278	29.0
Missing Data	4	.4	6	.6	17	1.8
	960	100.0	960	100.0	960	100.0

Another way to say this would be that you can make a written language user look as bad as you want. By the same token, you can make a written language user look as good as you want by insuring the print setting shown contains all those cues which co-occur naturally. The more abstract the written language setting, the greater the possibility of a pseudo form of reading or a sounding out or spelling response. With systematic deprivation of naturally available information sources, the greater the likelihood that children's responses become unnatural. That is, rather than be pragmatically and semantically appropriate, the more likely they will reflect pragmatically instructed

3.5.1 (Continued)

responses such as sounding or spelling out and/or pseudo forms of reading having no semantic intent. These data suggest, then, that the more unnatural the print setting, the less likely that children will access what they already semantically have demonstrated they know, and the more likely they are to respond in terms of an instructionally induced register which ignores semantics.

What else can we say about these data? First, children typically respond. That is to say, No Response is not a high frequency strategy which is employed. Across stages, No Response continues to decline. While one might expect that the more abstract the print setting the higher the rate of No Response, such is not the case.

This is not true in these data for a number of reasons. First, children in our sample all encountered Stage 1, Stage 2 and Stage 3 in this order. The more familiarity they had with the demands of the task, the less likely they were to use No Response as a communication decision option.

Secondly the increase in Don't Know suggests that the child had learned, through the process of the Task, how to get it to move along. By not responding we delayed the task to give the child time to respond. Don't Know on the other hand was an acceptable response, but had the added advantage from the child's perspective of moving the researcher on.

Third, you will note a sharp increase in Pseudo-Reading from Stage 1 (.7) to Stage 3 (38.2). Many times children repeatedly responded with items of print which they knew to have been included in

3.5.1 (Continued)

Stages 1 and 2. An example of this is the child who responded "Jell-O" to several instances of print in Stage 3. Here, then, we have evidence that past encounters with the print in our research task set parameters on the cognitive processing which children in Stage 3 were doing. In essence, these children had developed a particular strategy for handling the unique print setting of our experiment. These are, we must remind you, 3, 4, 5, and 6 year olds!

In many ways this phenomenon speaks poignantly to the pragmatic sophistication of the initiate language user. Even given the unnatural conditions under which we showed children print in Stage 3, rather than bow out, they were actively developing coping strategies which, while largely dysfunctional in their net effectiveness, were nevertheless logical and reflective of the child's unaltered faith that sense could be made of this task.

Children more frequently negotiated the communication contract under Stage 1 (14.8%) than they did under Stage 2 (6.0%) or Stage 3 (1.7%). Several explanations for this phenomenon are suggested. First it may be that given a natural print setting children feel more free to use natural communication strategies of which negotiation is one. The more unnatural the print setting, the more unnatural to evoke this register, and the more likely to evoke an instructional register where any response (spelling out, sounding out, pseudo reading) is typically perceived as being more acceptable than altering the focus of the question asked. From this perspective children pragmatically know what

3.5.1 (Continued)

is expected and limit the range of their communication decisions in accordance with their reading of the setting.

From another perspective these data may simply reflect the fact that children are quick learners. Having been through Stage 1 they rapidly learned what was expected and adjusted their response set accordingly. It is important to understand that these data do not show that children do less and less negotiation but simply that certain forms of negotiation (Category .6) become less frequent. Symbol Focus (.4) and Pseudo Reading (.5) increase drastically.

From still another perspective it may be that the more unnatural the print setting, the harder it is for the child to access what is already known about language. The decreasing trend in these data, then, reflects the effects of an ever deprived print setting on the quality of the communication decision reached. We suspect there is some validity in each of these arguments. We are equally convinced that each of these arguments speaks to why it is that literacy is best learned using print settings as they naturally occur.

Reader Communication Decision by Age. When one looks at communication decisions by age (see Figure 10), what one finds is what initially appears to be a sharp increase in the percentage of responses which maintain the communication contract (Category .7) from 3-year olds (50.6%) to 6-year olds (87.0%) in Stage 1. This difference, however, is somewhat misleading, as 3-year olds are much more prone to respond

3.5.1 (Continued)

3.5.1 Figure 10. Reader Communication Decision by Ages: Stage 1

	Age 3		Age 4		Age 5		Age 6	
Category Label	N	%	N	%	N	%	N	%
1. No Response	4	1.7	32	13.3	15	6.3	5	2.1
2. Attempts to Invalidate	0	0.0	0	0.0	0	0.0	1	.4
3. Don't Know	30	12.6	9	3.7	12	5.0	5	2.1
4. Symbol Focus	18	7.5	10	4.2	18	7.5	4	1.7
5. Pseudo Reading	0	0.0	7	2.9	0	0.0	0	0.0
6. Negotiates Contract	66	37.6	26	10.8	34	14.2	16	6.7
7. Maintain Contract	121	50.6	156	65.0	160	66.9	207	87.0

"Don't know" than are 6-year olds (12.6% as opposed to 2.1%). Since Don't know is a form of contractual maintenance, about half of the difference between 3 and 6-year olds in Category 7 is accounted for simply on the basis of what is essentially an experiential difference. Six year olds are more likely, after reviewing the available data, to come to a decision which allows them to respond to your question with an appropriate answer, than are 3-year olds. Three year olds, more frequently, after reviewing the available data, come to the decision they don't know. Having reached that decision they are more likely to negotiate the contract (that is, attempt to alter the question in hopes of moving the communication along) or say "I don't know." Since most responses which are coded as the child having negotiated the contract (.6)

3.5.1 (Continued)

are meaningful and semantically related to the print setting shown, differences between 3 and 6-year olds relative to maintaining the communication contract (.7) do not rest on whether or not the child was able to make sense out of the setting. Rather these differences rest solely on what pragmatic alternatives children perceived as available as they reflect both upon what they saw and what they already know. Age correlates with response type, in other words, not because one group understands how written language functions better than another group, but simply because with 3 additional years of encountering environmental print, 6-year olds have an experiential advantage (see Section 1.1 for a further discussion of this issue).

Equally interesting are the data which show what happens to children's communication decisions as you systematically deprive them of natural sources of information as we did in Stage 3 (see Figure 11). Without the benefit of naturally available cue systems 3 and 4-year olds respond by creating their own set of constraints. Typically these are responses like "Jell-O," "Jell-O," "Jell-O" which fall within the semantic field of the items represented in our research task, but which have little to do with the particular item presented. One way to look at these data is to see that 3 and 4 year olds were smart enough, given an unnatural print setting, to operate within the next best available set of constraints--namely call off the name of an item which they know previously existed in this task.

3.5.1 (Continued)

3.5.1 Figure 11. Reader Communication Decision by Ages: Stage 3

	Age 3		Age 4		Age 5		Age 6	
Category Label	N	%	N	%	N	%	N	%
1. No Response	1	.4	4	1.9	8	3.3	20	8.3
2. Attempts to Invalidate	0	0.0	0	0.0	0	0.0	0	0.0
3. Don't Know	35	13.8	17	8.0	25	10.5	24	10.1
4. Symbol Focus	12	4.7	8	3.8	106	44.4	22	9.2
5. Pseudo Reading	191	75.2	122	57.5	35	14.6	19	8.0
6. Negotiates Contract	1	.4	11	5.2	3	1.3	1	.4
7. Maintains Contract	14	5.5	50	23.6	62	25.9	152	63.9

The most frequent communication decision type for 5-year olds is to sound or spell out. Given the low frequency of these behaviors in 3 and 4 year olds, one has to conclude that sounding or spelling out is a learned response. Since most kindergarten classrooms formally introduce the study of letter-sound relationships--and classrooms in our sample were no exception--these data suggest 5-year old children learn this lesson well. The 3 and 4-year olds' strategy of calling off the name of a product which they knew appeared in an earlier task, logically has more basis in the task condition than does the 5-year old strategy of letter calling which is learned and task non-specific.

A comparison of the percentage of 6-year olds who maintained the contract under Stage 1 (87.0%) to those who did so under Stage 3 (63.9%) shows almost a 25% decrease (23.1%). From this perspective,

3.5.1 (Continued)

providing a natural print setting replete with the multi-modal cues, which are naturally available, is not only a benefit to the child but also to us instructionally as it insures that almost a quarter more of the children will be addressing written language in the manner in which we desire. In short, providing natural print settings for 6-year olds is a fast and expedient way not only to improve instruction but also written language learning. Similarly, depriving 3, 4, and 5-year olds of natural written language settings forces them into communication decisions which are clearly less functional and which have less to do with written language learning over the long haul.

Reader Communication Decision by Sex. Communication decisions by sex show little differences (see Figure 12). Although girls more

3.5.1 Figure 12. Reader Communication Decisions by Sex

	Stage 1		Stage 2		Stage 3	
Category Label	M	F	M	F	M	F
1. No Response	6.1*	5.6	3.3	7.1	4.5	2.5
2. Attempts to Invalidate	0.0	.2	0.0	0.0	0.0	0.0
3. Don't Know	6.7	5.0	8.6	8.8	11.5	9.9
4. Symbol Focus	3.4	7.1	1.9	10.3	18.1	13.3
5. Pseudo-Reading	0.0	1.5	4.8	12.4	39.6	38.3
6. Negotiates Contract	16.1	13.6	8.4	3.8	1.7	1.7
7. Maintains	67.7	67.0	73.0	57.6	24.7	34.2

* Figures are percentages.

3.5.1 (Continued)

frequently maintain the communication contract in Stage 3 this difference is negligible. Both girls and boys are more affected by the conditions under which the print is encountered than by inherent differences in their communication decision response patterns.

In light of these data one clearly has to ask where the written language sex differences so often reported reside. Clearly they do not reside in an inherent difference in ability at the pragmatic level.

Reader Communication Decision by Socio-Economic Status (SES). Children coming from Lower Socio-Economic (LSES) homes less frequently maintain the communication contract (see Figure 13) than do children coming from Middle Socio-Economic Status (MSES) homes (60.1% as opposed to 74.6%). On the other hand, LSES children more frequently respond

3.5.1 Figure 13. Reader Communication Decision by SES

	Stage 1		Stage 2		Stage 3	
Category Label	LSES	MSES	LSES	MSES	LSES	MSES
1. No Response	9.2*	2.5	7.7	2.7	4.4	2.6
2. Attempts to Invalidate	0.0	0.0	0.0	0.0	0.0	0.0
3. Don't Know	3.1	8.6	3.8	13.7	8.4	13.1
4. Symbol Focus	8.6	1.9	9.6	2.5	10.3	21.2
5. Pseudo-Reading	1.5	0.0	14.6	2.5	52.5	25.1
6. Negotiates Contract	17.5	12.2	5.9	6.3	1.5	1.9
7. Maintains	60.1	74.6	58.4	72.3	22.9	36.3

* Figures are percentages.

3.5.1 (Continued)

with sounding or spelling out and pseudo reading than do MSES children (10.1% as opposed to 1.9%). While these differences are negligible, the trends continue across Stages. Both MSES and LSES children are severely but equally affected by deprived print settings (see drop in Category 7 across Stages). LSES more than MSES, however, resort to a symbol focus or pseudo reading strategy (62.8% as opposed to 46.3%). Since these responses differ in that Symbol Focus is learned instructionally while Pseudo Reading is a task induced strategy, we might conclude that the pragmatics of the setting more strongly influence LSES children than they do MSES children. Again the conclusion which we draw is that while it is clearly more effective to use natural written language settings for all children, it is even more important to do so for LSES children if our purpose is to facilitate functional communication decisions which support literacy development.

Reader Communication Decision by Race. Clearly the most startling feature of the data displaying reader communication decision by race (see Figure 14) given past literature, is the differences which are not present. There is little in this data which would lead one to conclude a race superiority for responding to written language. Blacks more frequently negotiate the contract in Stage 1 (20.3% as opposed to 9.4%) but given the fact that maintenance of the contract is high for both groups (65.6% as opposed to 69.1%), this may well document a written language strategy strength rather than a weakness. Most negotiated contracts answer another question rather than the one posed,

3.5.1 (Continued)

3.5.1 Figure 14. Reader Communication Decision by Race

	Stage 1		Stage 2		Stage 3	
Category Label	B	W	B	W	B	W
1. No Response	2.3	9.4	4.6	5.9	6.6	0.4
2. Attempts to Invalidate	0.2	0.0	0.0	0.0	0.0	0.0
3. Don't Know	6.5	5.2	10.3	7.1	14.4	7.0
4. Symbol Focus	5.0	5.4	6.1	6.1	18.5	12.9
5. Pseudo-Reading	0.0	1.5	6.1	11.1	27.0	50.8
6. Negotiates Contract	20.3	9.4	6.9	5.2	3.4	0.0
7. Maintains	65.6	69.1	66.0	64.6	30.1	28.8

though semantically they relate to the topic at hand. They are then an attempt to keep the conversation going but to refocus it at a more meaningful level. It is not a "communication kill" strategy as categories .1-.5 might be perceived. From a communication perspective it is a highly functional strategy which is designed to pragmatically maintain the conversation.

Whites more frequently engage in a pseudo reading strategy when faced with unnatural print settings. Blacks are more prone, under this same condition, to respond Don't Know or by using a symbol-focus strategy. This later finding is interesting as it would suggest that Blacks learn their instructional lessons better than do their white counterparts.

When one combined No Response with Don't Know approximately 21% of the responses which Black children make would be interpreted as

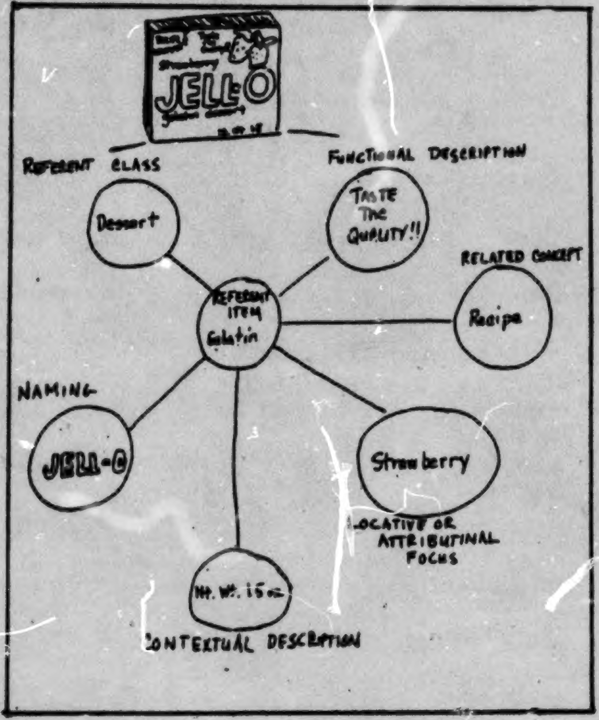
3.5.1 (Continued)

non-informative responses, as opposed to 7.4% for white children. White children seem to know that typically making any response--even a pseudo one--is better than not responding or saying "I don't know." In reality, however, no response and don't know are both more functional written language responses from a pragmatic perspective than is pseudo-reading. Probably what these data suggest more than anything is the profession's need to recognize the legitimacy of silence and saying "I don't know." Clearly these are pragmatically more functional written language strategies than is calling off names, a strategy which ignores semantics.

3.5.2 SEMANTIC INVOLVEMENT

Semantic Features - Print Setting. An examination of the semantic relationships of the print on a box of Jell-O to the referent item which it describes, reveals a set of distinct categories (see Figure 1).

3.5.2 Figure 1. Semantic Feature of Print Setting: Jell-O


JELL-O
REFERENT CLASS
Dessert
FUNCTIONAL DESCRIPTION
TASTE THE QUALITY!!
RELATED CONCEPT
Recipe
REFERENT ITEM
Gelatin
NAMING
JELL-O
Strawberry
LOCATIVE OR ATTRIBUTINAL FOCUS
Nt. Wt. 15 oz.
CONTEXTUAL DESCRIPTION

Gelatin Dessert is print identifying the referent or referent class. Taste the Quality is a functional description of what you are to do in relationship to the referent. Jell-O is a particular name given to the referent. Recipe is a related concept to Jell-O. Nt. Wt. is a contextual description of this particular box of Jell-O. Strawberry is an attribute of the reference item in question.

3.5.2 (Continued)

Schematically, then, these semantic relationships can be mapped. The element to which all these semantic features cohere is of course the referent item itself. The question, "What do you think this says?", asks the child to select from among available semantic features and come up with its name; in this instance, Jell-O.

But life is rarely as simple as all this. Given another product, say "Spray & Wash," the product's name is semantically a functional description of what one is supposed to do in relationship to this product. On the other hand with Johnson & Johnson Cotton Balls, the product's name is Cotton Balls, which semantically is the reference item involved. In fact, if you examine environmental print you soon discover that any and all semantic features of the print setting are capable of becoming the "name" or term by which the item is known. Even a contextual description, such as the hours during which a store is open, i.e., 7-11, can become not only the "name," but one that persists even when individual 7-Eleven stores have different business hours than their name suggests!

Figure 2 identifies different types of environmental print according to the semantic feature which has come to be known as its "name." This list, of course, could go on and on. The point is that we, in naming environmental print, make our selection from among a finite and identifiable set of semantic options. Sometimes combinations of these categories are used, such as in Minute Maid Orange Juice where Minute describes how long it takes you to make it; Maid suggests a

3.5.2 (Continued)

3.5.2 Figure 2. Selected Environmental Print: Alternate Features as Name

Functional Description

- Shake and Bake (breading)
- Handle With Care (fabric softener)
- Easy Wipe (re-usable towels)
- Die Hard (battery)
- Reach (toothbrush)
- No Parking This Side (road sign)

Reference Item or Class

- Eggs
- Cotton Balls
- Trash and Grass Bags
- Honey

Locative (L) or Attributional (A) Focus

Northern (bathroom tissue)	L
Ranch (salad dressing)	L
B & O (railroad)	L
Top Choice (dog food)	A
Fantastik (cleaner)	A
Star Kist (tuna)	A

Related Concepts

- Job Squad (paper towels)
- 5th Avenue (candy bar)
- Ivory (dishwashing soap)
- Dove (dishwashing soap)
- Mars (candy bar)

Naming

- Charmin (bathroom tissue)
- Vaseline (petroleum jelly)
- Bayer (aspirin)
- Jell-O (pudding)

Contextual Description

- 7-Eleven (food store)

3.5.2 (Continued)

related concept--in this instance we suspect done to equate the product with the luxury of having a maid; and *Orange Juice* identifying the referent item itself. Sometimes a product's name, through use, becomes a reference class. A prime example is *Kleenex*. This, of course, poses a problem for the manufacturer. If *Kleenex* becomes a reference class, theoretically *Puffs* could advertise itself as *Puffs Kleenex*. To prevent this, the manufacturers of Kleenex hire people to guard against the use of the term Kleenex with a lower-case k.

What all this means, of course, is that the semantic characteristics of environmental print are organized and systematically identifiable not only for adults but for children in this culture. The following tables identify the semantic features of print on the individual items of environmental print which we used in the Environmental Print Task, and attempts to show how these semantic features of print changed across stages for a given item.

3.5.2 (Continued)

3.5.2 Figure 3. Environmental Print Items: Semantic Features Across Stages

Product /	Stage	.1	.2	.3	.4	.5	.6
Dynamints	1	X	X		X	X	X
	2	X			X	X	X
	3				X	X	X
Kroger Eggs	1	X	X		X	X	X
	2	X			X	X	
	3				X	X	
Lego	1	X		X		X	
	2	X				X	
	3					X	
Indianapolis	1					X	
	2					X	
	3					X	
For Sale	1		X		X	X	
	2		X			X	
	3		X				
McDonald's	1	X	X			X	
	2					X	
	3					X	
Stop	1		X				
	2		X				
	3		X				
No Parking This Side	1		X				
	2		X				
	3		X				
Jell-O	1	X		X	X	X	X
	2	X				X	
	3					X	
Coca-Cola	1	X	X			X	
	2	X				X	
	3					X	
Evel Knievel Chopper	1	X	X		X	X	X
	2	X			X	X	X
	3				X	X	
Crest	1	X			X	X	X
	2					X	
	3					X	
Burger Chef	1	X		X		X	
	2	X		X		X	
	3			X		X	
Wendy's	1	X		X	X	X	X
	2	X			X	X	X
	3					X	

Key

.1	Contextual Description
.2	Functional Description
.3	Related Concept
.4	Referent Identification
.5	Naming
.6	Locative or Attributional Focus

3.5.2 Figure 3 (Continued)

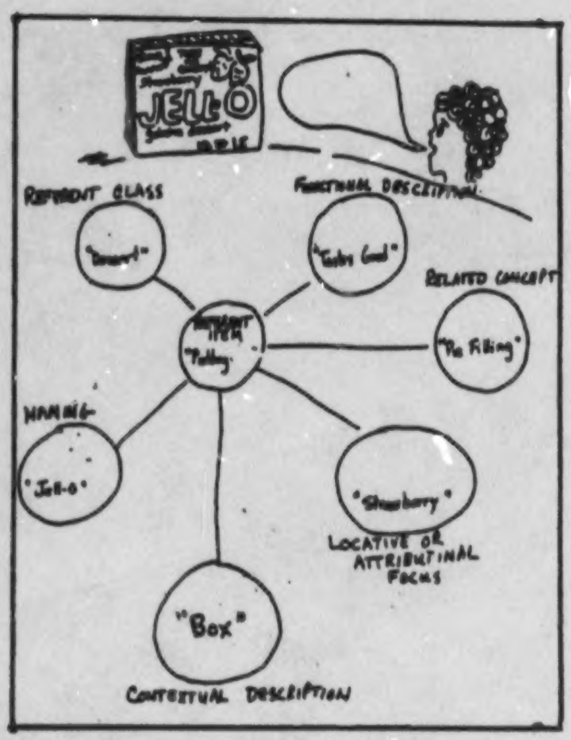
Product /	Stage	.1	.2	.3	.4	.5	.6
U.S.	1				X	X	X
Mail	2				X	X	X
	3				X	X	X
Puffs	1	X			X	X	X
	2	X			X	X	X
	3					X	
Kroger	1	X	X		X	X	X
Milk	2	X			X	X	X
	3				X	X	
Band-Aid	1	X			X	X	X
	2	X				X	
	3					X	
Kroger	1	X			X	X	X
Cottage	2	X			X	X	X
Cheese	3				X	X	

Semantic Features - Response. Semantically the set of options which children select to talk about print coincides perfectly with the set of semantic features adults use to create environmental print settings (see Figure 3a). To explicate this point, let's examine the semantic characteristics of responses we received to one item of print: Jell-O.

Some children responded "Pudding" identifying the referent item itself. Others responded "Dessert" identifying the class to which the referent item belongs. "Eat it," another response we received, describes the referent functionally in relationship to the language user. "Strawberry" identifies an attribute or characteristic of this box of Jell-O. Other children identified a related concept, namely, "Pie Filling." Some named the referent item as particular in responding, "Jell-O." And some, in their responses described the immediate

3.5.2 (Continued)

3.5.2 Figure 3a. Semantic Features of Responses: Jell-O


JELL-O
REFERENT CLASS
"Dessert"
FUNCTIONAL DESCRIPTION
"Tastes Good"
RELATED CONCEPT
"Pie Filling"
REFERENT ITEM
"Pudding"
NAMING
"Jell-O"
"Strawberry"
LOCATIVE OR ATTRIBUTINAL FOCUS
"Box"
CONTEXTUAL DESCRIPTION

context of the particular referent item shown, as is demonstrated in the response, "Pudding box." Using these 6 categories (Contextual Description; Functional Description; Related Concept; Referent Identification; Naming; Locative or Attitudinal Focus) to describe the semantic features of the response, one can successfully code 95.1% of all Stage 1 responses.

In order to be able to code an additional 3.6%, one needs to identify a seventh category. For lack of a better term we have labeled this category, Chaining. It's the response "Rubber Bands" when shown Band-Aid.

3.5.2 (Continued)

Figure 4 illustrates that the response "Rubber Band" can be related to the reference item through a semantic sequence where "Bands" becomes a class which obviously was identified implicitly by the responder. Having identified the class "Bands," an association is made to "Rubber Bands." Conceptually each of these items, Band-Aid and "Rubber Band," stands in equi-distance to the class category of which they are a member.

3.5.2 Figure 4. Chaining

Band-Aid
↓
[Bands]
↓
Rubber Bands

Chaining may also be a semantic feature category for the naming of environmental print. At present no good example presents itself. The best example we have been able to come up with is S.O.S., a Morse Code for "Help" which is also the brand name of a steel wool soap pad. Miles Laboratory may well have used chaining to come to their decision in naming this product, though the perfect example would seemingly be one step further removed. For now all we can say is theoretically an example should exist.

3.5.2 (Continued)

With the addition of chaining category 98.6% of all Stage 1 responses can be successfully coded semantically. This leave 1.4% of the responses which are coded as having no apparent semantic intent. While some may argue that the response "Joe" when shown Jell-O semantically shares a name feature. Our decision to code it as no apparent semantic intent is based on the reasoning that the child in this instance was more involved in monitoring grapheme-phoneme relationships than in monitoring semantic relationships.

When one thinks of the fact that we found 98.6% of the responses given by children to environmental print in Stage 1 to be semantically acceptable and that at least 95.1% of the responses coincided with the semantic features which we as adults use to name environmental print (that is, assuming we do not have a true chaining category), one has to be duly impressed with the young child's semantic access of written language. Clearly 3 and 4 year olds have almost as much access as 5 and 6 year olds or this figure could never be this high.

On Correcting Children's Responses. These data do raise another important point, however, and that relative to the area of correction. If we as helpful adults say to children that their response, "Pudding," is wrong when we ask them "What do you think this says?", having expected the response "Jell-O," what have we told them? Clearly their response, "Pudding," which identifies the referent class rather than its particular name, is not a bad choice given the nature of how environmental print works semantically.

3.5.2 (Continued)

In fact, in order for children to solve the puzzle of how environmental print works semantically, they must retain within their response repertoire the possibility that some environmental print is labeled in terms of its reference class; in other words, the very hypothesis they were testing when they said "Pudding" when confronted with a Jell-O box. While technically, then, an adult may seem justified in correcting "Pudding" to "Jell-O" in this particular instance of print, doing so, however, when a child is responding to environmental print by giving the product's particular name not its referent class is, in the long term, not only wrong but quite dysfunctional.

We raise this issue specifically because we believe there is a great deal of re-examination needed relative to the issue of correction. Clearly the issue isn't as simple as Skinnerian psychologists would have us believe. It may in fact be our "errors" which lead us to the identification of the semantic parameters within a given class of print. To the extent that this is true, we may not only be confusing correctness for language growth but confusing language growth with correctness.

Semantic Features - Print Setting in Relationship to Semantic Features - Response. It is interesting to think about why the print on a particular item of environmental print is there. Let's take, for example, the print on a McDonald's cup. There are 3 print items: McDonald's; Please Put Litter In Its Place; and TM (an abbreviation meaning trade mark).

3.5.2 (Continued)

Now if we ask ourselves why these pieces of print are there we must conclude that McDonald's is there to give the cup a particular identity. When we ask ourselves why would anyone want to label a cup--particularly a paper cup of limited durability--we must conclude that they put McDonald's on it not so much that people who find one bring it back, but rather to get persons to associate quick foods with the name McDonald's, an associative process often called good advertising.

The TM is not on there for the same purpose, however. In fact, the TM is not on there for the sake of the consumer at all. Its presence is more to tell other business establishments that they can't use McDonald's as their name. Its presence is not there for the benefit of consumers generally, but only particular consumers who could become potential competitors. In one sense, then, the TM has to do with the function which the name McDonald's has on the cup. Its particular function is to protect the use of the name McDonald's on similar consumer items. McDonald's advertises while TM protects, and in an indirect sense protects the original function for which McDonald's was put on the cup in the first place.

The 3rd item of print, Please Put Litter In Its Place, is again consumer directed. Its function is to inform users of their responsibility relative to the disposition of this product once they have completed using it. It also serves a secondary function and that is to inform the conservation-conscious consumer that McDonald's is an environmentally reputable establishment having taken certain precautions to help curb litter.

3.5.2 (Continued)

This means, of course, that the print on a piece of environmental print serves a variety of semantic functions. From a conventional standpoint we can analyze each item and map its relationship to the referent item itself. McDonald's is print which names the reference item as particular; TM is print which contextually describes this particular name and its particular graphic form; Please Put Litter In Its Place is print which functionally describes how we are to act in relationship to this product at a particular point in time.

It is important to understand, however, that this is a conventional and static interpretation of the semantic features of print available in this print setting. In reality Please Put Litter In Its Place may sign McDonald's to the environmentally conscious consumer who knows that few quick food places have taken steps to help protect the environment. This is, then, the relationship between signifier and significant or meaning. The point being that a particular graphic sign may have alternate meanings for language users.

When we say the print McDonald's on a McDonald's cup semantically functions to name the referent item as particular, we are making a statement of semantic convention. In reality the print McDonald's may sign a trade mark, a name, or even a social responsibility (Please Put Litter In Its Place), quick food places generally, non-nutritional foods, the American way, Indiana's contribution to economic immorality or a host of other meanings depending on the language user or language users in question.

3.5.2 (Continued)

McDonald's, as an item of print on a McDonald's cup, when used by a reader is best viewed as a meaning potential. The young children in our sample demonstrate through the responses which they give what the range of that meaning potential is. In the case of the McDonald's cup, children's responses ranged from functional descriptions like 'Drink it' (N=1) to related concepts like 'Burger King' (N=5), to reference class identification like 'Hamburger place' (N=3), to naming; that is, saying 'McDonald's' (N=38), to chaining like 'Old McDonald had a Farm' (N=1). Little is gained by looking at these responses in terms of whether or not the sign was used conventionally. Clearly those responses other than McDonald's are as viable as is the 'McDonald's' response. Some of the responses can not be thought of as right or wrong. In fact the one thing we can say is semantically all 48 make sense and fall within a meaning potential which the sign 'McDonald's' symbolizes for us too.

While clearly matching semantic features of print to the semantic features of a response doesn't make theoretical sense, looking at the range of semantic features in the response enables us to map what children see as the meaning potential given a particular print setting. Given the fact that we were able to classify 98.6% of children's responses as having particular semantic characteristics, which we as adults also notice, in itself speaks to the child's access to the semantic system of environmental print. If we had asked children "What does this print mean to you?" we may have been able to map

3.5.2 (Continued)

more closely the meaning potential. The question we did use, "What do you think this says?" gets at a particular meaning potential; namely, the potential names to call this thing. What the data show us when we compare semantic features of print to semantic features of response is that children have accessed how the naming of environmental print works, so much so that only 1.4% of their responses are semantically unacceptable or fall outside this coding system.

Conventionality of their responses is relative. In one sense children's responses are extremely conventional in that they fall neatly within the 7 categories which we as adults use in naming environmental print. In another sense they are less conventional if we ask, did they use the print signs to symbolize what adults conventionally interpret the print to symbolize (or did they give a name?), e.g., McDonald's semantically is a name not a functional description. In fact fewer of the responses had the semantic feature of name in their response.

From a conventional viewpoint we can ask, given the semantic features of print, what is the likelihood of children coming up with one or more of these features in their response? Since some print settings have more semantic features available than others, it is necessary to figure out what the chance hit rate would be and contrast this to the actual hit rate before deciding if children did better than chance. When this is done (see Figure 4a), we find that children did better than chance on 15 out of the 20 items of print we used in the Environmental Print Task. That is, in 15 out of 20 cases the semantic

3.5.2 (Continued)

3.5.2 Figure 4a. Chance and Actual Hit Rates: Semantic Features

Products	Chance Hit Rate	Actual Hit Rate	Better Than (+) or Worse Than (-) Chance
01 Dynamints	66%[1]	62%[2]	-[3]
02 Kroger Eggs	83%	100%	+
03 Lego	50%	38%	-
04 Indianapolis	16%	11%	-
05 For Sale	50%	43%	-
06 McDonald's	50%	81%	+
07 Stop	16%	70%	+
08 No Parking	16%	64%	+
09 Jell-O	83%	100%	+
10 Coca-Cola	50%	63%	+
11 Evel Knievel Chopper	83%	91%	+
12 Crest	66%	84%	+
13 Burger Chef	50%	92%	+
14 Wendy's	83%	97%	+
15 Toss Across Game	83%	65%	-
16 U.S. Mail	50%	97%	+
17 Puffs	66%	70%	+
18 Kroger Milk	83%	97%	+
19 Band Aid	66%	97%	+
20 Kroger Cottage Cheese	66%	97%	+

---

[1] Since Dynamints had 4 of 6 semantic features present in the print setting the child had a 66% chance of hitting one of these semantically if he were simply operating within the semantic parameters which adults use to label print.

[2] In this case only 62% of the responses received coincided with one or more of the semantic features of the print.

[3] The children as a group did worse than chance. The most popular semantic feature selected which caused this hit rate was a RELATED concept which meant children were prone to try 'Tic - Tac - Toe' or 'Tic - Tacs' in this instance.

3.5.2 (Continued)

features or interpretations they gave for the print setting coincided with a conventional adult interpretation of the print setting.

It is interesting to note, however, that in the 5 cases in which their sign-symbol relationship is different from the conventional sign-symbol relationship, their choice is semantically organized and systematic. For Dynamints the most frequent semantic feature in the response which did not coincide with a conventional interpretation of the semantic features in the print was a related concept (e.g., "Tic Tacs"--34.8% of all responses to Dynamints included this semantic feature); for Lego it was reference class (e.g., "Blocks"--51.5%); for Indianapolis it was functional description (e.g., "Go This Way"--48.0%); for For Sale it was related concept (e.g., "Wood For Sale"--42.9%) and for Toss Across Game it was also related concept (e.g., "Tic - Tac - Toe"--42.9%). What these data indicate is that even when the semantic feature of the response did not coincide with a conventional interpretation of the available semantic text features, children's responses were far from random. Rather, children's responses in these instances too were systematic and organized. Since most road signs semantically provide a functional description of what we are to do in relationship to this sign (STOP, GO THIS WAY, NO PARKING THIS SIDE, etc.), it should not surprise us that 48% of the children who responded to this item included this semantic feature as part of their response.
A similar case could easily be made for each of the items mentioned.

3.5.2 (Continued)

In fact if anything is surprising in these data it is that we have little evidence that the child's semantic system of language is organized differently from the way the adult's semantic system is organized relative to environmental print. This statement holds across age (3, 4, 5, and 6-year olds) as well as sex, SES, and race.

Semantic Features of Response by Stages. A study of the semantic features of the response across the stages of our research task also reveals a fairly consistent pattern emerging between responses in Stage 1 and Stage 2 (see Figure 5). The exceptions to this statement

3.5.2 Figure 5. Semantic Features - Response by Stages

	Stage 1		Stage 2		Stage 3	
Category Label	N	%	N	%	N	%
1. Contextual Description	4	0.6	2	0.2	0	0.0
2. Functional Description	49	7.6	49	5.1	25	9.0
3. Related Concept	78	12.1	148	15.4	7	2.5
4. Referent Identification	202	31.2	149	15.5	6	2.2
5. Naming	249	38.5	235	24.5	57	20.4
6. Locative or Attribute	33	5.1	26	2.7	5	1.8
7. Chaining	23	3.6	84	8.8	38	13.6
8. No Apparent Semantic Intent	9	1.4			141	50.5

3.5.2 (Continued)

are Reference Identification and Chaining. These exceptions are, of course, logical. With the absence of available information sources (shape) and certain print items, children are deprived of important semantic cues which increase the amount of cognitive search they must do (hence an increase in Chaining) and which depresses their overall success. Semantically they don't become more dependent on the print, they are simply less successful overall and forced to make wilder leaps in an effort to make sense of the print setting before them. These trends are even more evident in Stage 3. Abstracting a natural print setting doesn't force the child to deal with a particular feature of graphic display we may feel important (i.e., print) but seemingly has the reverse effect. It almost assures us that most children will either fail to respond or, if they do, respond in a fashion further from our desired goal, than they would have, had we used a more natural context. This is an extremely important insight and one that clearly challenges conventional wisdom relative to initial reading instruction. If you want children to attend to print you provide a natural print setting which potentially allows them to attend to everything including print. Context cues, rather than distracting children's attention from print, draws the child's attention to print. Non-print information sources are in a sense natural teaching aids which help you help the child deal with print the way you had intended in the first place. Print dependency is learned naturally because of the semantic redundancy available from the various informational sources in the print setting. To teach

3.5.2 (Continued)

print dependency directly is not the mark of good instruction but rather it makes literacy instruction hard not only for the child but the teacher.

Response Time. Kibi, age 4, when shown Evel Knievel Chopper and asked "What do you think this says?" paused a total of 5 seconds before she responded, "Motorcycle." Charvin, also age 4, when shown the same item of print and asked the same question, also paused a total of 5 seconds before he responded, "Motorcycle."

Despite the surface level similarities of these response times they are not the same. Kibi's response is coded as having been made Immediately; Charvin's response is coded as having been made after a Pause. How can this be, as both responses came 5 seconds after the question? Clearly, nothing is simpler than measuring pauses. One just monitors the second-marker on the videotape counter and records the time delay between the end of the researcher's question and the child's response. Or so past researchers would lead us to believe. But in order to record response time in this fashion, much of what is known about language and language users must be ignored, in particular that language variation is an expected event.

One of the first things that strikes you as you watch the videotape protocols of various children responding to our environmental print task is that children individually differ in their response times. That is to say, what is a Pause for Charvin, who typically responds within a half-second of the question, is an Immediate response for Kibi,

3.5.2 (Continued)

who typically takes 4 seconds to respond. So what looks like a straightforward research issue, turns out to be a fundamental language issue. For purposes of coding, 3 categories of response time were recorded: Immediate, defined as the normal pause of the language user; Pause, the normal rate of the language user plus a count of 4 to 6 ; Prolonged Pause, the normal rate of the language user and a count of 6+.

Coding of response times took place after the transcription of videotape protocols to insure familiarity with the child and his or her normal response time. Interestingly, few disputes arose, as is evident by the high interrater reliability for this category. When they did they were resolved by a third coder. While clearly the procedure we developed to record response time is less precise than the second by second calibrations possible with a stop-watch or videotape counter, they are more accurate. Precision in measurement can never be put ahead of validity in measurement, and that is the choice. To use past definitions of response time as simply delayed standard time held constant across language users is to ignore what we know about language. Our procedures for recording response time are not only more valid but also proved to be extremely reliable. What is, of course, incredible to us is that this issue has been successfully ignored by past researchers.

Response Time by Stages. Probably the most striking aspect of the data describing response time by the stages in our research tasks

3.5.2 (Continued)

is the consistency of patterns which emerge. There is virtually no difference between response time patterns across stages (see Figure 6). This is surprising. Clearly the amount of information available to be processed varied greatly across conditions. In Stage 1 children had a multimodal set of cue systems available, whereas in Stage 3 information sources were systematically limited. We must conclude from these data then that the sheer amount of information available does not delay recognition and hence response, otherwise one would expect a more rapid response rate in Stage 3 than in Stage 1.

3.5.2 Figure 6. Response Time by Stages

	Stage 1		Stage 2		Stage 3	
Category Label	N	%	N	%	N	%
1. Immediate	883	86.8	861	89.7	849	88.4
2. Pause	39	4.1	25	2.6	40	4.2
3. Prolonged Pause	23	2.4	14	1.5	21	2.2
Missing[a]	65	6.8	60	6.3	50	5.2

[a] Instances where the research procedure interfered with the recording of response time. These include interruptions, the product being accidentally brushed off the holder, and instances where the child interrupted the researcher's asking of the question, thus necessitating their repetition.

Children obviously receive what information is available through the impulses of light they receive and come to a decision as to how to respond. That is, they rarely decide that looking harder or thinking longer will solve their problem. They either know (and know they know) or don't know (and know they don't know).

3.5.2 (Continued)

While the stages of our research task did not affect response time, it did affect the quality of their responses--a phenomenon which has already been partially discussed when we looked at responses pragmatically via the reader's communication decision. When we developed this taxonomy we were interested in exploring whether the amount of information available orchestrated meaning and hence speeded response time, or whether the more information available while still orchestrating meaning increased processing time and delayed response time. We were, on this issue, undecided and simply wanted more information. While out data do not resolve the issue of response time, they do suggest that other factors have more to do with it than does the availability of information sources in the print setting. One of these factors we suggest is quality of experience.

Response Time by Age. A study of response time by age across stages in our research task, shows a negative relationship exists between age and response time (see Figure 7). That is, the older the child, the slower the response time. This phenomenon holds across research stages.

This may initially appear counter intuitive. Clearly 3-year olds do not know as much about language as do 6-year olds. Yet one might assume the more you know the faster you respond. The data should be reversed!

While we believe 6-year olds do know more than 3-year olds--and we have evidence to support this belief--what these data suggest,

3.5.2 (Continued)

3.5.2 Figure 7. Response Time by Age Across Stages

	Age 3			Age 4		
Category Label	1	2	3	1	2	3
1. Immediate	98.3	98.7	99.6	96.6	97.7	98.6
2. Pause	0.9	0.8	0.4	2.9	2.3	1.4
3. Prolonged Pause	0.9	0.4	0.0	0.5	0.0	0.0

	Age 5			Age 6		
	1	2	3	1	2	4
1. Immediate	90.2	94.2	86.1	87.6	91.8	88.5
2. Pause	6.7	3.1	8.2	6.9	5.0	7.8
3. Prolonged Pause	3.1	2.7	5.6	5.6	3.2	3.7

then, is simply having more information doesn't speed response time. Instead, knowing more, there is more to consider. What experience does is alert us to more of what needs to be attended to.

These data are particularly interesting in light of research which suggests that the amount of information available in a print setting affect response time per se. Clearly then when one couples these 2 pieces of data one has to conclude that it's not the amount of information available but the amount of information attended to that affects response time. This then is largely an experiential factor. Having encountered print settings more frequently, 6-year olds have essentially more mature print schemas, which while not speeding response

3.5.2 (Continued)

time, do alert them to more of what is out there that has to be considered.

When one thinks of this finding in relationship to the primacy which response time has in the traditional learning research experiment--the faster the response the better the learning--one has to look anew and askance at such data. Clearly the relationship between response time and learning is not as straight-forward as many have posed it in the past. These data, then, do call for a change in attitude. To the extent that we equate delayed response times to stupidity or uninformedness, vital cognitive processing involved in literacy learning may be short-circuited or discouraged.

Obviously the relationship between age and delayed response time does not continue ad nauseum or there would be noticeable differences between children and adults. Some sort of curvilinear relationship undoubtedly exists, but further exploration of this relationship will have to await another study.

Figures 8, 9, and 10 present response time by sex, SES, and race respectively. As can be seen, variables outside of these must be found to account for differences in rate of and quality of literacy learning.

3.5.2 (Continued)

3.5.2 Figure 9. Response Time by Sex

	Stage 1		Stage 2		Stage 3	
Category Label	M	F	M	F	M	F
1. Immediate	91.1*	95.1	95.9	95.5	91.3	95.2
2. Pause	5.6	3.1	2.4	3.2	5.8	3.0
3. Prolonged Pause	3.3	1.8	1.7	1.4	2.9	1.7

3.5.2 Figure 10. Response Time by SES

	Stage 1		Stage 2		Stage 3	
Category Label	L	M	L	M	L	M
1. Immediate	93.3*	92.8	96.6	94.8	94.3	92.3
2. Pause	3.9	4.8	2.1	3.5	3.5	5.3
3. Prolonged Pause	2.8	2.4	1.4	1.7	2.2	2.4

3.5.2 Figure 11. Response Time by Race

	Stage 1		Stage 2		Stage 3	
Category Label	B	W	B	W	B	W
1. Immediate	92.5*	93.7	93.8	97.5	90.7	95.7
2. Pause	4.3	4.4	3.8	1.8	6.4	2.6
3. Prolonged Pause	3.2	1.9	2.4	0.7	3.0	1.7

* Figures are percentages.

3.5.3 SYNTACTIC INVOLVEMENT

Syntactic Characteristics of Graphic Display. When a reader looks at a Band-Aid box and responds, "Band-Aid," the reader has, in fact, made a series of complex decisions, including syntactic ones. To understand the nature of these decisions it is important first of all to describe the print setting and then equate the graphic display shown to the response received.

Four categories were created to describe the syntactic characteristics of the print settings used in the Environmental Print Task. These included: (1) Smaller Than Word; (2) Word; (3) Phrase or Clause Level Unit; (4) Multiple Phrase or Clause Level Unit. An example of a Smaller Than Word print setting would be the H on a road sign signaling hospital. In reality no print setting we used fell in this category. The category was retained, nevertheless, for use in further research studies. Because of our desire to use the same set of categories to describe the syntactic characteristics of the response as we did the graphic display and since several responses were smaller than word level units, the category made sense and so was retained here.

An example of Word level graphic display is STOP as it appears on that road sign. Word level print settings are not as frequent as one might assume. Most print settings we initially considered word level proved not to be upon careful examination. Figure 1 lists the items of environmental print used in this task and the units of print found on each item.

3.5.3 (Continued)

3.5.3 Figure 1. Environmental Print Task: Available Print Units

Item	Print Units
Dynamints	Dynamints Peppermint Artifically Flavored Mints Fast Freshing Action Net Wt. .55 oz
Kroger Eggs	Kroger ® Grade A Extra Large Taste the Quality Eggs One Dozen USDA A Grade
Lego	Lego Police
Indianapolis	Indianapolis
For SALE	For Sale Bill Morrow Realtors 332-6311
McDonald's	McDonald's Please Put Litter in Its Place TM
Stop	Stop
No Parking This Side	No Parking This Side
Jell-O	Jell-O Strawberry Artificial Flavor Gelatin Dessert Four ½ cup servings Net Wt. 3 oz. Delicious Pie Recipe Inside ® Brand

3.5.3 Figure 1 (Continued)

Item	Print Units
Coca-Cola	Coca-Cola Coke Enjoy Trademark ®
Evel Knievel Chopper	Chopper King of the Stuntmen Evel Knievel For children 5 and up Complete with: *Energizer *Figure *Chopper, Gyro Powered Motor, No Batteries, No Electricity IDEAL True cycle action, will jump, wheelie and race at top speed. Amazing action super bike for the King of Stuntmen. With shock-absorbing front fork.
Crest	Crest Net Wt. 1.5 oz. With fluoristan Toothpaste Regular Flavor Accepted, Council on Dental Therapeutics American Dental Association
Burger Chef	Burger Chef ® TM
Wendy's	Wendy's Quality Is Our Recipe Old Fashioned Hamburger Chili & Frosty Rich & Meaty Dairy Dessert
Toss Across Game	Toss Across Game Indoor and Outdoor Fun for Everyone go..go..go.. for 3 in a row... with this wonderful family fun game by Ideal A family game ages 6 & up 2 to 4 players

3.5.3 Figure 1 (Continued)

Item	Print Units
U.S. MAIL	U.S. MAIL
Puffs	Puffs Yellow NEW! Softest Ever Facial Tissue 200 2-ply tissues 9.6 x 8.25 INC. Lift Tab Pull Up.
Kroger Milk	Kroger Homogenized Vitamin D Milk Keep Refrigerated One Half Gallon 1.89 l
Band-Aid	Band-Aid Brand Plastic Strips All one size 60 Bandages 60 - 3/4 in strips Improved! Stays on better even in water Johnson & Johnson
Kroger Cottage Cheese	Kroger ® Country Style Small Curd Cottage Cheese 4% Milkfat Minimum Net Wt. 24 oz. (1 Lb. 8 Oz.) - 680 g.

An example of a Phrase or Clause Level Unit print setting is No Parking This Side as it appears on the road sign. Phrase or Clause Level Units graphic displays are more frequent than Word Unit print settings but not as frequent as we imagined before examining most environmental print.

By far the most frequent syntactic category found in environmental print is Multiple Phrase or Clause Level Units. Examples range from McDonald's as it appears on a McDonald's cup which includes 3 phrase or clause level units--McDonald's, TM, and Please Put Litter In Its Place--

3.5.3 (Continued)

to Kroger's Milk, as it appears on a milk carton, which includes 6 phrase or clause level units--Kroger, Homogenized, Vitamin D, Milk, Keep Refrigerated, One Half Gallon 1.89 1.

Figure 2 shows the frequency of print settings having certain syntactic characteristics across Stages in Task 1. What this table

3.5.3 Figure 2. Environmental Print Items: Syntactic Features Across Stages

Product /	Stage	.1	.2	.3	.4
Dynamints	1				x
	2		x		
	3		x		
Kroger Eggs	1				x
	2				x
	3			x	
Lego	1				x
	2		x		
	3		x		
Indianapolis	1		x		
	2		x		
	3		x		
For Sale	1				x
	2				x
	3			x	
McDonald's	1				x
	2		x		
	3		x		
Stop	1		x		
	2		x		
	3		x		
No Parking This Side	1			x	
	2			x	
	3			x	
Jell-O	1				x
	2			x	
	3		x		
Coca-Cola	1				x
	2				x
	3		x		

Key	
.1	Smaller Than Word
.2	Word
.3	Phrase or Clause Level Unit
.4	Multiple Phrase or Clause Level Units

3.5.3 Figure 2 (Continued)

Product /	Stage	.1	.2	.3	.4
Evel Knievel Chopper	1				x
	2				x
	3			x	
Crest	1				x
	2		x		
	3		x		
Burger Chef	1			x	
	2			x	
	3			x	
Wendy's	1				x
	2				x
	3		x		
Toss Across Game	1				x
	2				x
	3			x	
U.S. Mail	1			x	
	2			x	
	3			x	
Puffs	1				x
	2				x
	3		x		
Kroger's Milk	1				x
	2				x
	3			x	
Band-Aid	1				x
	2				x
	3		x		
Kroger Cottage Cheese	1				x
	2				x
	3			x	

Key	
.1	Smaller Than Word
.2	Word
.3	Phrase or Clause Level Unit
.4	Multiple Phrase or Clause Level Units

suggests is that print settings varied syntactically across conditions. McDonald's was coded a Phrase or Clause Level Unit in Stage 1, but a Word Level Unit in Stages 2 and 3. Kroger Milk was coded a Multiple Phrase or Clause Level Unit in Stages 1 and 2, but a Phrase or Clause Level Unit in Stage 3. Figure 3 summarizes the syntactic characteristics of graphic displays as they varied across stages in the Environmental Print Task.

3.5.3 Figure 3. Syntactic Characteristic of Graphic Displays Across Stages

Category Level	Stage 1	Stage 2	Stage 3
1. Smaller Than Word	0	0	0
2. Word	2 (10%)	6 (30%)	11 (55%)
3. Phrase/Clause	3 (15%)	4 (20%)	9 (45%)
4. Multiple Phrase/Clause	15 (75%)	10 (50%)	0

Syntactic Characteristic of Responses. In addition to describing the syntactic characteristics of the graphic display presented to the child, the syntactic characteristics of the responses made by the child need also be described. The same categories--Smaller Than Word, Word, Phrase or Clause Level Unit, and Multiple Phrase or Clause Level Unit--were used.

It is important to understand that the syntactic characteristics of the response involves a choice on the part of a language user. If someone showed us a Jell-O Strawberry Pudding box and asked us what it says, we might well respond, "Jell-O"; someone else might respond, "Jell-O Pudding"; and a third person might well respond, "Strawberry," thinking surely the information we desire is something more than the obvious Jell-O. The point is, rarely do we read everything available even when we are involved in a task where such a response would be acceptable. Simply put, we select that print which we read from a field of available options.

Young children do the same thing. When shown Kroger's Milk on a milk carton and asked, "What do you think this says?", responses

3.5.3 (Continued)

ranged from "Kroger's" to "Milk" to "Kroger's Milk" to "Kroger, Homogenized, Vitamin D, Milk." Even in this later instance, the child still selected what was read, as Keep Refrigerated and One Half Gallon 1.89 were also available elements of the print. It's important to understand that selection of which print to process is neither a poor reader nor an initiate reader phenomenon, it is an all-reader expected event.

The following Figure shows the distribution of responses relative to their syntactic characteristics across response. About all such data tell us is that 3, 4, 5, and 6-year olds have a respond preference of words regardless of the syntactic characteristics of the print setting shown to them. That is, while the syntactic characteristics of the graphic display varied considerably across conditions (the reader is referred back to Figure 3), the syntactic characteristics of the children's responses across conditions is virtually the same.

3.5.3 Figure 4. Syntactic Characteristics of Responses

Category Label	Task 1	Task 2	Task 3
1. Smaller Than Word	.2*	.5	.4
2. Word	67.2	67.4	57.9
3. Phrase/Clause	30.0	30.8	41.7
4. Multiple Phrase/Clause	2.6	4.0	0.0
	N=649	N=623	N=278

* Figures are percentages.

3.5.3 (Continued)

Syntactic Match between Graphic Display and Response. By comparing the syntactic characteristics of the graphic display to the syntactic characteristics of the actual responses (see Figure 5), one theoretically should be able to determine the degree to which young children syntactically monitor their responses in relationship to the print setting shown them. In reality, however, such a notion is somewhat faulty, as typically responses to environmental print are word or phrase level units regardless of the syntactic characteristics of the print setting. This is especially so for multiple phrase or clause level graphic displays such as Kroger's Milk. In fact, we would be surprised indeed if

3.5.3 Figure 5. Examples of Syntactic Characteristics of Graphic Displays and Responses

Print Setting	Graphic Display	Responses (Examples)
Kroger Milk	Kroger Homogenized Vitamin D Milk Keep Refrigerated One Half Gallon 1.89	"Kroger" "Kroger Milk" "Milk"
Burger Chef	Burger Chef	"Burger Chef" "Dairy Queen" "Burger King" "Hamburgers" "Arby's"
STOP	STOP	"Stop" "Go" "Danger"

3.5.3 (Continued)

someone actually told us everything it says on a milk carton if we had asked, "What does this say?" We would, in fact, expect them to reduce their response to a word--"Milk"; or a phrase--"Kroger Milk." Given a multiple phrase or clause level graphic display, we expect the response syntactically to be either a word or single phrase level unit.

This is not the case, however, for all graphic displays. A word level graphic display, we might suspect would have a higher than average probability of eliciting a word level response, if, in fact, the syntactic characteristics of this graphic display are being monitored. The same is true for a single phrase or clause level graphic display. Under these circumstances, we would expect a higher incidence of single phrase or clause level units as response. We are, then, legitimately arguing it both ways. We are saying with a word level graphic display, we expect a word level response, but that the same expectation cannot hold for a multiple phrase or clause level graphic display. In part this is true for the reasons already discussed, but in part it is also true because some words are always more salient--like Jell-O, Band-Aid, Milk--than others in multiple phrase or clause level graphic displays. This issue, like most issues in written language, is more complex than may initially meet the reading eye.

When we examine the data comparing syntactic characteristics of graphic displays to syntactic characteristics of responses, as has been done in Figure 6 by Stages, indeed what we predict holds up. When the

3.5.3 (Continued)

3.5.3 Figure 6. Syntactic Characteristics of Graphic Displays and Responses: A Comparison across Stages

Stage 1

Text Response	2. Word	3. Phrase	4. Multiple
2. Word	64.7*	33.3	2.0
3. Phrase	34.0	66.0	0.0
4. Multiple	73.7	22.9	3.2

Stage 2

Text Response	2. Word	3. Phrase	4. Multiple
2. Word	76.3*	21.6	2.1
3. Phrase	41.1	56.5	1.6
4. Multiple	67.0	26.2	6.1

Stage 3

Text Response	2. Word	3. Phrase
2. Word	71.2*	28.1
3. Phrase	39.8	60.2

* Figures are percentages.

3.5.3 (Continued)

graphic display is a word, the response tends to be a word (Stage 1--66.7%; Stage 2--76.3%; Stage 3--71.2%). When the graphic display is a single phrase or clause level unit, the response tends to be a single phrase or clause level unit (Stage 1--66.0%; Stage 2--56.5%; Stage 3--60.2%). The only case where this is not true is with multiple phrase or clause level graphic displays, and here the correspondence is what we would expect--some reduction of the syntactic unit to a phrase or word.

These patterns then strongly support the notion that children orchestrate their responses to environmental print in syntactically appropriate and predictable ways. In fact, if anything is surprising in these data it is that when shown a text of a word level syntactic unit 33.3% responded with a phrase and 2% responded with a multiple phrase level unit. It is not the syntactic reduction of the print setting which surprises us, but rather the syntactic expansion of the print setting. The expansion cells (see shaded area in Figure 6) show that 28 to 35.2% of all responses across various conditions display this phenomenon.

One might even argue that syntactic correspondence between graphic display and response is an expected event which when it occurs is taken for granted. Clearly showing a child Indianapolis on a road sign and receiving the response "GO THIS WAY DOWN THE STREET" is syntactically more unexpected than the child responding "Book." It takes experiences such as this to make us cognizant of how much we take syntactic correspondence between texts and responses for granted even when we deal with very young children.

5

3.5.3 (Continued)

The fact that children, when shown environmental print, most frequently give one word responses does not surprise us. It is what we suspect adults, too, would do. What these data suggest is that 3, 4, 5, and 6-year olds have a syntactic response schema much like ourselves when and if they decide to maintain the communication contract. This is an important finding. It supports the notion that young children are written language users and as such have internalized a syntactic expectation for how one responds to reading in an environmental print setting.

3.5.4 GRAPHIC INVOLVEMENT

Comparison of Print Setting and Response: Graphic Involvement. When shown a Kroger Cottage Cheese container and asked, "What do you think this says?": Kibi, age 4, responded, "Standard"; Charvin, age 4, responded, "K-Mart"; Misty, age 4, responded, "Kroger's"; and Stephanie, age 4, responded, "Cottage Cheese Carton."

If you compare these responses in terms of their graphic involvement with print available in the setting (see Figure 1), it is evident that various responses show various degrees of involvement. "Standard," from a graphic perspective, is a response which is Unavailable in the Print Setting. "K-Mart," from a graphic perspective, reflects the possibility of some involvement in that Kroger's and K-Mart graphemically do begin the same. That is, the response, "K-Mart" reflects a Minimal Signal when print setting and response are compared on a graphemic basis. "Kroger's" is a response which is Available Within the Print Setting, as would be "Cottage Cheese," "Country Style Cottage

3.5.4 Figure 1. Comparison of Print Setting & Response: Graphic Involvement

Print Setting	Available Graphic Units	Responses	Response Codings
Kroger's Cottage Cheese	Kroger Country Style Small Curd Cottage Cheese 4% Milkfat Minimum Net Wt. 24 oz. 1 lb. 8 oz. 680 grams	Standard	Unavailable in Print Setting
		K-Mart	Minimal Signal
		Kroger's	Available within Print Setting
		Cottage Cheese Carton	Mixed Response

3.5.4 (Continued)

Cheese," "Kroger's Cottage Cheese," "Cheese," or a number of responses which children in our sample came up with. "Cottage Cheese Carton" is a mixed response from a graphic perspective. That is, part of the response "Cottage Cheese" is available within the graphemes of the text, while another part, "Carton," is unavailable within the graphemes of the text presented.

If the graphic characteristics of the print setting shown played no part in the decision which the child made as to what the print said, then one would expect a random distribution of scores across each of these categories across Stages in Task 1. As can be seen in Figure 2,

3.5.4 Figure 2. Graphic Involvement in Responses Across Stages

	Stage 1		Stage 2		Stage 3	
Category Label	N[a]	%[b]	N	%	N	%
1. Unavailable in Print Setting	174	26.9	231	37.1	122	43.9
2. Minimal Signal	15	2.3	52	8.3	68	24.5
3. Available Within Print Setting	391	60.4	298	47.8	81	29.1
4. Mixed Response	67	10.4	42	6.7	7	2.5

[a] Responses coded are those which Maintain Communication Contract (1.7).

[b] Adjusted frequency.

3.5.4 (Continued)

this is hardly the case. Overall 73.1% (2.3 + 60.4 + 10.4 = 73.1) of the responses in Stage 1 show some level of graphic involvement between the text and the response; 62.8% of the responses in Stage 2 show similar characteristics; as do 56.1% of the responses in Stage 3. What these data suggest is that children 3, 4, 5, and 6 years old do monitor the graphemes available in the print setting in reaching their decision as to what print says. It further suggests that the more cue systems there are available to them (print + other information sources), the better they are at using graphemic information. Reducing the informational field reduces their effectiveness in the use of graphic information. In fact, when only print is made available (as it was in Stage 3) rather than facilitate their use of this cue system, their responses show less utilization. The message seems clear: If you want young children to attend to the graphic information available in print you need to provide a natural enough print setting so that what the child knows about other cue systems can support his understanding and utilization of the print cue system.

One should also note that fewer responses of the total number elicited were seen as maintaining the communication contract in Stage 3 as opposed to Stage 1 (see numbers under N column). In light of these data one must question what is achieved by reducing print settings to just print. Not only do more children fail to maintain the contract, but more fail to involve themselves with the cue system of print.

3.5.4 (Continued)

Having said this much probably the most impressive figure in this chart is the 24.5 percentage figure recorded for Minimal Signal in Stage 3. In many ways this figure demonstrates the child's tenacity given all odds. Despite and in spite of our efforts to make print appear nonsensical, 24.5% of the time the child lacking any better information by which to respond will try his hardest to use what we've provided (inadequate though it may be) and incorporate it into his response.

Graphic Involvement by Age. Several things can be said of graphic involvement by age (see Figure 3). First, as the child has more and more experience with written language the more and more his response demonstrates his ability to orchestrate the graphic information available in the print setting (see Stage 1 - Available Within Print Setting; Age 3 - 47.2%; Age 4 - 54.5%; Age 5 - 57.1%; Age 6 - 75.4%). The fact that this is an experiential factor as opposed to simply an age factor is best seen by looking at the percentage of responses reflecting no graphic involvement (see Unavailable in Print Setting - Stage 1; Age 3 - 38.2%; Age 4 - 31.4%; Age 5 - 27.3%; Age 6 - 16.4%). These percentages do not change significantly until age 6. This means, of course, that by far the majority of responses at each level did show some graphic involvement (for Stage 1 across Categories 2., 3., and 4.; Age 3 - 61.9%; Age 4 - 68.6%: Age 5 - 72.7%; Age 6 - 83.6%). It simply is not the case that 3 year olds don't use

3.5.4 (Continued)

3.5.4 Figure 3. Graphic Involvement by Age Across Tasks

	Age 3			Age 4		
Category Label	1	2	3	1	2	3
1. Unavailable in Print Setting	38.2*	59.1	92.9	31.4	47.2	70.0
2. Minimal Signal	3.3	10.8	7.1	3.2	7.5	28.0
3. Available Within Print Setting	47.2	28.0	0.0	54.5	38.5	0.0
4. Mixed Response	11.4	2.2	0.0	10.9	6.8	2.0

	Age 5			Age 6		
Category Label	1	2	3	1	2	3
1. Unavailable in Print Setting	27.3	43.5	71.0	16.4	14.4	19.7
2. Minimal Signal	1.9	9.3	22.6	1.4	7.2	25.7
3. Available Within Print Setting	57.1	36.0	6.5	75.4	73.1	50.7
4. Mixed Response	13.7	11.2	0.0	6.8	5.3	3.9

* Figures are percentages.

print while 6 year olds do. In fact given the fact that 61.9% of all responses received from 3 year olds demonstrate graphic involvement with text, one is initially surprised that only 11.7% more of the 6-year olds' responses to print demonstrate graphic involvement. The difference between 6-year olds and 3-year olds is not in whether they use print to come to their decision so much as it is whether they can function when dependent only on print. That is, the more abstract we make the print

3.5.4 (Continued)

setting the more likely we are to get children, not to focus on print but ignore it in making their response decisions. In fact these data would suggest that if we force 3-year olds to deal with print in isolation we can nicely prove to ourselves that they are not readers (92.9% of their responses show no graphic involvement). If you want children to monitor print, the more contextual cues you provide the greater the possibility they will do so.

It remains to be noted that this discussion is a particularly stringent one. Clearly the response "Standard" shares some "graphic" configurative characteristics with Kroger's just by virtue of the fact that both are single words of about the same length. "Aim" for Crest, "Yogurt" for Cottage Cheese, "Root Beer" for Toss Across, "Bank" for Stop, "Army" for U.S. Mail, "Pepsi" for Coca-Cola, "Kleenex" for Puffs, "Street" for Indianapolis, and other examples which could easily be cited from the data we received to further support this argument. To say these responses do not display graphic involvement may be definitionally correct, though one has the feeling that it's the categorical definition which is the issue, not the use of print by the children in arriving at their response decisions.

It is, of course, problems of this sort which led us to talk of literacy as a set of orchestrated decisions which transcend individual cue systems. It is also for this reason that we propose that literacy might better be viewed as awareness, knowledge, and use of signs and sign complexes (see sections 1.2 and 1.3). The power of these

3.5.4 (Continued)

views is evident in the data we have shared as all semantic, syntactic, and graphic involvement figures we have given rest on a principle of embedding. Graphemically 60.4% of all responses show correspondence to the graphic display, but, as a function of our coding, this also means these responses further display pragmatic, semantic, and syntactic correspondence. The 60.4% figure quoted, it should be remembered, is the stringent graphic involvement figure. Practically all responses deemed pragmatically appropriate are ipso facto semantically, syntactically, and configuratively orchestrated. To make a pragmatic decision is to simultaneously have made semantic, syntactic, and graphic ones.

4.0 TAXONOMY: ENVIRONMENTAL PRINT

4.1 SUMMARY OF CATEGORIES AND THEIR FUNCTION

1.0 READER COMMUNICATION DECISION: Describes the relationship between the researcher's request to read and the subject's choice of communication response.

.1 No Response
.2 Attempts to Invalidate Contract
.3 Don't Know
.4 Symbol Focus: Naming/Sounding Out
.5 Pseudo-Reading
.6 Re-negotiates Communication Contract
.7 Maintains Communication Contract

2.0 RESPONSE TIME: Records time lapse between Q1 and the subject's initial response. (Not coded when C1 is .1)

.1 Immediate
.2 Pause
.3 Prolonged Pause

3.0 SYNTACTIC CHARACTERISTICS OF PRINT SETTING: Describes the units of language in the print setting.

.1 Smaller Than Word
.2 Word
.3 Phrase or Clause Level Unit
.4 Multiple Phrase or Clause Level Units

4.0 SYNTACTIC CHARACTERISTICS OF RESPONSE: Describes the units of language in the response. (Code when C1 is .7)

.1 Smaller Than Word
.2 Word
.3 Phrase or Clause Level Unit
.4 Multiple Phrase or Clause Level Units

5.0 GRAPHIC INVOLVEMENT: Describes the relationship between response and print setting in terms of graphic availability. (Code when C1 is .7)

.1 Unavailable in Print Setting
.2 Minimal Signal
.3 Available Within Print Setting
.4 Mixed Response

4.1 (Continued)

6.0 RESPONSE EVOLUTION: Describes the pragmatic and semantic evolution of decisions made in response to Q1. (Code when C1 is .6 or .7)

.1 No Evolution Evident
.2 Evolution Evident - Single Communication Response Category
.3 Evolution Evident - Mixed Communication Response Category

7.0 SEMANTIC FEATURES - PRINT SETTING: Describes the relationship of the available print to its referent item. (Multiple categories may be checked)

.1 Contextual Description
.2 Functional Description
.3 Related Concept
.4 Referent Identification
.5 Naming
.6 Locative or Attributinal Focus
.7 Chaining

8.0 SEMANTIC FEATURES - RESPONSE: Describes the relationship of response to the referent item shown. (Code when C1 is a .7; Multiple categories may be checked)

.1 Contextual Description
.2 Functional Description
.3 Related Concept
.4 Referent Identification
.5 Naming
.6 Locative or Attributinal Focus
.7 Chaining
.8 No Apparent Semantic Intent

9.0 SEMANTIC EXPANSION ACROSS QUESTIONS: Examines the child's responses across Q1, Q2, and Q3 for semantic generation and/or expansion. CODE ONLY FOR STAGE 1.

.1 No Apparent Semantic Base
.2 Generation
.3 Maintenance
.4 Expansion

4.1 (Continued)

10.0 AVAILABLE INFORMATION SOURCES - PRINT SETTING: Describes those sources which are available to the language user in reaching a decision as to what the print says. (Multiple categories are recorded) CODE ONLY FOR STAGE 1.

.1 Print
.2 Numbers
.3 Pictures
.4 Graphic Design
.5 Color
.6 Shape
.7 Situational Context

11.0 PERCEIVED/DEMONSTRATED INFORMATION SOURCES - LANGUAGE USER: Describes those sources which the language user verbally or physically indicates are used in reaching a decision as to what the print says. (Code when information is available from Q1, Q2, or Q3. Multiple categories are recorded) CODE ONLY FOR STAGE 1.

.1 Print
.2 Numbers
.3 Pictures
.4 Graphic Design
.5 Color
.6 Shape
.7 Situational Context
.8 Personal Experience
.9 Non-Discriminated Response

12.0 USES LANGUAGE ABOUT LANGUAGE: Records instances of language use which describes or reflects upon the systems themselves.

.1 Yes

4.2 WHAT GETS CODED - TAXONOMY: ENVIRONMENTAL PRINT

.1 What Constitutes a Response? (When response is inaudible, handle as omitted data.)

Question: What do you think that says?
Print: For Sale
Reader: That says home
Response: Home

Question: What do you think that says?
Print: Kroger
Grade A Extra Large
Taste the Quality
Eggs
One Dozen
Reader: Egg. Krogers
Response: Egg. Krogers. (4.4)

.2 The final unprompted or set of responses to Q1 no matter where they occur.

Question: What do you think this says?
Print: Jell-O
Reader: Gelatin [What?] Strawberries and stuff like that.
Response: Gelatin

Question: What do you think that says?
Print: Coca-Cola
Reader: McDonalds [What?] It says . . . I don't know what it says.
Response: McDonalds

Question: What do you think this says?
Print: Kroger Milk
Reader: 1.1 Milk [What things do you see that help you know what it says?] 1.2 Milk. Sunrise. [NOTE: Here a determination has been made that the reader is continuing to answer Question 1 even though Question 2 has been asked.]

Question: What do you think this says?
Print: No Parking This Side
Reader: B (pause), a car, my mommy car. Her Working.
Response: B (because of research setting child knows further questions will be asked and goes on to answer them)

Question: What do you think this says?
Print: Kroger Eggs
Reader: Eggs, Kroger Eggs
Response: Kroger Eggs

4.3 (Continued)

1.0

.5 Pseudo-Reading

A reading-like response used repeatedly (minimum of 3 occurrences) without regard for semantic intent.

Print	Reader
Jell-O	pop
Coke	pop
Stop	pop
Crest	pop

Print	Reader
Jell-O	B-L-O
Coke	B-L-O
Stop	B-L
Crest	B-L-O-X

Print	Reader
Jell-O	cat
Coke	dog
Stop	animal
Crest	rabbit

Print	Reader
Jell-O	me
Coke	you
Stop	your daddy
Crest	my boy

Print	Reader
Jell-O	Ellen
Coke	Robbie
Stop	Towanna
Crest	Ann

4.3 TAXONOMY: ENVIRONMENTAL PRINT (EXPANDED FORM)

1.0 READER COMMUNICATION DECISION: Describes the relationship between the researcher's request to read and the subject's choice of communication response.

.1 No Response

.2 Attempts to Invalidate Contract

Question: What do you think this says?
Print: No Parking This Side
Reader: I can't tell you, cause I can't read.

.3 Don't Know

Includes responses such as "I forgot" and other verbalizations to signal unwillingness to respond.

.4 Symbol Focus: Naming/Sounding Out

Question: What do you think this says?

Print: U.S. Mail
Reader: U-S-E

Print: For Sale
Reader: What's that letter right there?

Print: Crest
Reader: $ Crost

Print: Band-Aid
Reader: Without the B it would be and.

4.3 (Continued)

1.0

.6 Renegotiates Communication Contract

Question: What do you think this says?

Print: U.S. Mail
Reader 1: A mailman
Reader 2: A birdie flew

Print: Dynamints
Reader: I don't know (first response).
May I eat them? (coded response)

Print: Toss Across Game
Reader 1: Throw "X" and "O"
Reader 2: A,B,C's

Print: Kroger Milk
Reader 1: Some milk goes in there
Reader 2: A milk box

Print: Kroger Eggs
Reader: Things

Print: Evel Knievel Chopper
Reader 1: Picture
Reader 2: Says Picture

Print: Indianapolis
Reader 1: Yard
Reader 2: Ground

.7 Maintains Communication Contract

Question: What do you think this says?

Print: U.S. Mail
Reader 1: Mail
Reader 2: Mailbox
Reader 3: U.S. Army

Print: Kroger Milk
Reader 1: Milk
Reader 2: Kroger's

Print: Evel Knievel Chopper
Reader: What is it anyway? (first response)
Evel Knievel Cereal (coded response)

4.3 (Continued)

2.0 RESPONSE TIME: Records time lapse between Q1 and the subject's initial response. (Not coded when C1 is .1)

.1 Immediate

The normal pause rate of the language user.

.2 Pause

The normal pause rate of the language user and a count of 4 to 6.

.3 Prolonged Pause

The normal pause rate of the language user and a count of 6+.

4.3 (Continued)

3.0 SYNTACTIC CHARACTERISTICS OF PRINT SETTING: Describes the units of language in the print setting.

.1 Smaller Than Word

Print: H
Description: Road Sign signaling hospital

Print: CIA
Description: Designation for Central Intelligence Agency

.2 Word

Print: STOP
Description: Road Sign

.3 Phrase or Clause Level Unit

Print: No Parking This Side
Description: Road Sign

Print: Burger Chef
Description: On cup with outline of chef's hat and no other text.

.4 Multiple Phrase of Clause Level Units

Print: McDonald's
Please Put Litter in Its Place
Description: On cup with outline of Golden Arches

Print: Kroger
Homogenized
Vitamin D
Milk
Keep Refrigerated
One Half Gallon 1.891
Description: Milk Carton

Print: Lego
Police
Description: Toy Box

4.3 (Continued)

4.0 SYNTACTIC CHARACTERISTICS OF RESPONSE: Describes the units of language in the response. (Code when C1 is .7)

.1 Smaller Than Word

Print: U.S. Mail
Reader: U.S.

.2 Word

Print: No Parking This Side
Reader: Stop

Print: Bloomington
Reader: Book

Print: Band-Aid
Reader: Band-Aid

.3 Phrase or Clause Level Unit

Print: Burger Chef
Reader: Burger Chef

Print: Lego
Reader 1: Lego stuff
Reader 2: Fire engine

.4 Multiple Phrase or Clause Level Units

Print: Kroger
Eggs
One Dozen
Reader: Egg. One Dozen.

Print: Kroger
Milk
Reader: Milk
Sunrise

4.3 (Continued)

5.0 GRAPHIC INVOLVEMENT: Describes the relationship between response and print setting in terms of graphic availability. (Code when C1 is .7)

.1 Unavailable in Print Setting

Print: Kroger
Country Style Small Curd
Cottage Cheese
4% Milkfat Minimum
Net Wt. 24 oz. (1 lb., 8 oz.) - 680 g
Reader: Standard

.2 Minimal Signal

Print: Kroger Cottage Cheese
Reader 1: Cream
Reader 2: Car
Reader 3: Kro-kro- (1st and 2nd response) Crazy (coded response).
Reader 4: That says . . . that says (1st response) Coca-Cola (coded).
Reader 5: K-Mart

Print: U.S. Mail
Response: Milk

Print: Coca-Cola[2]
Response: Coke

.3 Available Within Print Setting

Print: Kroger Cottage Cheese
Reader 1: Kroger's
Reader 2: Kroger's Cottage Cheese
Reader 3: Cottage Cheese

Print: Dynamints
Reader: Mints

4.3 (Continued)

5.0

.4 Mixed Response

An available option in text plus extension.

Print: Kroger Cottage Cheese
Reader 1: K-Mart Cottage Cheese
Reader 2: Cottage Cheese Carton

Print: Lego
Police
Reader: Policeman

4.3 (Continued)

6.0 RESPONSE EVOLUTION: Describes the pragmatic and semantic evolution of decisions made in response to Q1. (Coded when C1 is .6 or .7)

.1 No Evolution Evident

Print: Coca-Cola
Response: Coca-Cola (1.7)

Print: Coca-Cola
Response: Drink it (1.6)

Print: Puffs
Response: Napkin (1.7)
Napkin (1.7)

.2 Evolution Evident - Single Communication Response Category

Print: Evel Knievel Chopper
Response: Motorcycle (1.7)
Evel Knievel Motorcycle (1.7)

Print: No Parking This Side
Response: No Parking (1.7)
No Parking Car (1.7)

Print: For Sale
Bill Morrow
Response: Far (1.7)
Far (1.7)
For Sale Boat (1.7)

.3 Evolution Evident - Mixed Communication Response Categories

Print: Coca-Cola
Response: Drink it (1.6)
Coke (1.7)

Print: For Sale
Response: D.K. (1.3)
Name (1.6)

Print: Lego
Response: Toys (1.7)
Build Something (1.6)

Print: Dynamints
Response: I don't know that one (1.3) . . .
Dairy (1.7

4.3 (Continued)

7.0 SEMANTIC FEATURES - PRINT SETTING: Describes the relationship of the available print to its referent item. (Multiple categories may be coded)

.1 Contextual Description

Print which describes a physical quality of this specific instance of the item.

Example 1:	Net Wt. 55 oz. (print describing the weight of this particular box of Dynamints)
Example 2:	One Dozen (print describing the quantity of eggs sold in this particular box of Kroger Eggs)
Example 3:	Four ½ cup servings (print describing the quantity of pudding which can be made from this particular box of Jell-O)
Example 4:	One half gallon 1.89 liters (print describing the amount of milk in this particular carton of Kroger Milk)
Example 5:	60-3/4 inch strips (print describing the contents of this particular box of Band-Aids)
Example 6:	(print describing a physical quality of this particular graphic design in relationship to the referent item)

4.3 (Continued)

7.0 SEMANTIC FEATURES - PRINT SETTING CONTINUED

.2 Functional Description

Print which identifies what the referent does, what can be done with the referent item, or how one is to perform in relationship to the referent item.

Example 1:	Taste the Quality (print describing what one is to do with the eggs in the Kroger Egg Carton).
Example 2:	For Sale (print indicating how one can perform in relationship to the house being advertised on this Bill Morrow Realtor Sign).
Example 3:	Please Put Litter In Its Place (print telling you what to do with the McDonald's cup when you are finished with it).
Example 4:	Stop (print on Stop sign telling you how to perform in relationship to this road sign).
Example 5:	Enjoy (print on Coca-Cola cup telling you how to feel as you drink Coke).
Example 6:	Try cycle action, will jump, wheelie and race at top speed (print on Evel Knievel Chopper box identifying what the referent item does).
Example 7:	Go ... go ... go ... for 3 in a row (print on Toss Across Game box describing how one is to perform in relationship to this referent item).
Example 8:	Toss Across (print on Toss Across Game box telling how one is to perform in relationship to this referent item).
Example 9:	Keep Refrigerated (print on Kroger Milk Carton telling you how you are to perform in relationship to this referent item once purchased).
OTHER EXAMPLES:	For Ages 5 and Up

4.3 (Continued)

7.0 SEMANTIC FEATURES - PRINT SETTING CONTINUED

.3 Related Concept

Print which refers to other concepts (or the names of those concepts) which are related but different from the referent item itself.

Example 1: Pie Recipe (print on Jell-O box referencing two concepts--pie and recipe--which are related to the referent item).

Example 2: Burger Chef (print on quick food store cup which references the person who fixes hamburgers--a concept which relates to the quick food place itself, but which is distinctively different).

Example 3: Chili--Rich & Meaty (print on Wendy's cup referencing related products sold at this particular quick food place, but not sold in this cup).

Example 4: Police (Lego Box)

4.3 (Continued)

7.0 SEMANTIC FEATURES - PRINT SETTING CONTINUED

.4 Referent Identification

Print which identifies referent item or referent class.

Example 1: Mints (print on Dynamint box label identifying referent class).

Example 2: Eggs (print on Kroger Egg Carton identifying referent class of which Kroger Eggs is but an instance).

Example 3: Realtors (print on Bill Morrow Realtors Sign identifying the referent class to which Bill Morrow belongs).

Example 4: Gelatin (print on Jell-O box identifying referent item).

Example 5: Motor and cycle (two words on Evel Knievel Chopper box identifying referent class).

Example 6: Toothpaste (print on Crest box identifying referent item).

Example 7: Game (print on Toss Across Game label identifying referent class).

Example 8: Mail (print on U.S. Mail logo identifying referent class of which U.S. Mail is a particular type).

OTHER EXAMPLES:
Tissues (print on Puff box)
Milk (print on Kroger milk carton)
Bandages (print on Band-Aid box)
Cottage Cheese (print on Kroger Cottage Cheese container)

4.3 (Continued)

7.0 SEMANTIC FEATURES - PRINT SETTING CONTINUED

.5 Naming

Print created to label referent item as a particular instance.

Example 1: Kroger (print found on particular egg cartons, cottage cheese containers, and milk cartons identifying these products as particular).

Example 2: Lego (print on toy box identifying toys as a particular type).

Example 3: Indianapolis (print on road sign identifying location as particular).

OTHER EXAMPLES:
Bill Morrow (print on For Sale sign)
McDonald's (print on quick food place cup)
Jell-O (print on gelatin dessert box)
Coca-Cola (Print on drink cup)
Evel Knievel Chopper (print on toy box)
Crest (print on toothpaste box)
Wendy's (print on quick food place cup)
Johnson & Johnson (print on bandage box)
Burger Chef (7.5, 7.3)
U.S. Mail (7.5, 7.4, 7.6)
Puffs (7.5)

4.3 (Continued)

7.0 SEMANTIC FEATURES - PRINT SETTING CONTINUED

.6 Locative or Attributinal Focus

Print which describes a characteristic of referent item or a relationship between the item and a particular location.

Example 1: Peppermint (print on Dynamint box describing a characteristic of the referent item).

Example 2: Grade A Extra Large (print on Kroger Egg Carton describing referent item).

Example 3: Strawberry (print on Jello-O box describing referent item).

Example 4: U.S. (print on U.S. Mail logo describing the relationship between the item and a particular location).

Example 5: Country Style (print on Kroger Cottage Cheese container describing a characteristic of the referent item).

OTHER EXAMPLES:
No Batteries, No Electricity (print on Evel Knievel Chopper box)
Regular flavor, fluoristan (print on Crest box)
Old Fashioned (print on Wendy's logo)
Indoor and Outdoor Fun for Everyone (print on Toss Across Game box)
Yellow (print on Puff box)
Homogenized, Vitamin D (print on Kroger Milk carton)
Plastic (print on Band-Aid box)

.7 Chaining

Print which can be related to the referent item through any one of a sequence of semantically and/or pragmatically derived concept chains.

4.3 (Continued)

8.0 SEMANTIC FEATURES - RESPONSE: Describes the relationship of response to the referent item shown. (Coded when C1 is .7; Multiple categories may be coded)

.1 Contextual Description

A response which describes a particular instance of an item.

Print: Kroger Eggs
One Dozen
Reader: [Egg.] One Dozen.

Print: Kroger Milk
Reader: One half gallon

Print: Band-Aid
Reader: Band-Aid Brand (7.5, 7.1)

.2 Functional Description

Response which identifies what the referent does, what can be done with the referent item, or how one is to perform in relationship to the referent item.

Print: Crest
Reader: Brush teeth

Print: Indianapolis
Reader: Thata way (taken to mean "Go thata way")

Print: Stop
Reader: Stop

Print: No Parking This Side
Reader: Stop

4.3 (Continued)

8.0 SEMANTIC FEATURES - RESPONSE CONTINUED

.3 Related Concept

Response which refers to other concepts (or the names of those concepts) which are related but different from the referent item itself.

Print: Crest
Reader: Toothbrush

Print: U.S. Mail
Reader: Mailman

Print: Wendy's
Reader: Milk shake

Print: Evel Knievel Chopper
Reader: Evel Knievel Cereal

Print: Bloomington
Reader 1: One Way
Reader 2: Sesame Street

Note: Assumed that relationship seen is signness.

Print: Dynamints
Reader 1: Chicklets
Reader 2: Gum
Reader 3: Tic Tacs

Print: Puffs
Reader: Kleenex (7.3, 7.4)

Note: Kleenex is not coded 7.5 as it is seen as a reference class more than as a proper name.

Print: Coca-Cola
Reader: Pepsi

Print: McDonald's
Reader: Ronald McDonald's (7.3, 7.5)

4.3 (Continued)

8.0 SEMANTIC FEATURES - RESPONSE CONTINUED

.4 Referent Identification

Response identifies referent item or referent class.

Print: Crest
Reader: Toothpaste

Print: Puffs
Reader 1: Tissues
Reader 2: Toilet Tissue (7.3, 7.4)
Reader 3: Kleenex (7.3, 7.4)

Print: Evel Knievel Chopper
Reader: Motorcycle

Print: Band-Aid
Reader: Bandage

Print: Kroger Eggs
Reader 1: Eggs
Reader 2: Groceries

Print: Jell-O
Reader: Pudding

Print: Dynamints
Reader 1: Mints
Reader 2: Candy

Print: Lego
Reader 1: Toys
Reader 2: Building Blocks

Print: Wendy's
Reader: Cup

4.3 (Continued)

8.0 SEMANTIC FEATURES - RESPONSE CONTINUED

.5 Naming

Response identifying a particular name for referent.

Print: Jell-O
Reader: Jell-O

Print: Band-Aid
Reader: Johnson & Johnson

Print: Wendy's
Reader: Arby's (7.3, 7.5)

Print: Milk
Reader: Kroger's

Print: McDonald's
Reader 1: Ronald McDonald's (7.3, 7.5)
Reader 2: Old McDonald's (7.3, 7.5)

4.3 (Continued)

8.0 SEMANTIC FEATURES - RESPONSE CONTINUED

.6 Locative or Attributinal Focus

Response describes a characteristic of referent item or a relationship between the item and a particular location.

Print: No Parking This Side
Reader: Bank (L)

Print: Stop
Reader: School (L)

Print: Kroger Cottage Cheese
Reader: Grocery Store (L)

Print: Kroger Milk
Reader: A&P (7.3, 7.5, 7.6) (L)
Note: Reader explicated that she gets milk at A&P Downtown in response to Q3.

Print: Lego
Reader: Floor (L)
Note: Reader explicated that he built blocks on the floor in response to Q3.

Print: Dynamints
Reader: Hot (A)

Print: Jell-O
Reader: Raspberries

4.3 (Continued)

8.0 SEMANTIC FEATURES - RESPONSE CONTINUED

.7 Chaining

Response which can be related to the referent item through any one of a sequence of semantically and/or pragmatically derived concepts chains.

Print:	Band-Aids	
	↓	
	[Bands]	(Class which referent item belongs)
	↓	
Response:	Rubber Bands (S)	
Print:	U.S. Mail	
	↓	
	[Sign]	(Signs which share color, limited print, and similar print styles)
	↓	
Response 1:	Gas Station (S)	
Response 2:	Texaco (S)	
Response 3:	Car Wash (S)	
Response 4:	Oil (S)	
Print:	Jell-O[2]	(1st item in notebook holding Stage 2 products. Because of this setting the child assumes that the first item is title page (Response 1) or page of directions (Response 2)
	↓	
Response 1:	Book (P)	
Response 2:	Read (P)	
Print:	Toss Across[2]	
	↓	(Color and print style)
Response:	Root Beer	
Print:	Jello[2]	
	↓	(Color signals signness)
Response 1:	Sign	
Response 2:	New School	
Print:	McDonald's[2]	
	↓	
Response 1:	Donald Duck	
Response 2:	M is for Misty	

**Mark as .7 any response in Stage 2 or 3 which falls within the range of products used in the Environmental Print Task as such responses provide evidence of the child's monitoring of meaning within the constraints set up by the research setting itself.

4.3 (Continued)

8.0 SEMANTIC FEATURES - RESPONSE CONTINUED

.8 No Apparent Semantic Intent

Print:	Stop
Reader:	Jeremy
Print:	Jell-O
Reader:	Joe
Print:	Bloomington
Reader:	Blowgun

4.3 (Continued)

9.0 SEMANTIC EXPANSION ACROSS QUESTIONS (Coded only for Stage 1; Code for all items; A blank means missing data): Examines the child's responses across Q1, Q2, and Q3 for semantic generation and/or expansion.

.1 No Apparent Semantic Base

Print Setting: Jell-O
Q1: NR
Q2: pt
Q3: DK

Note: Use .1 when responses contain only metalinguistic information.

Print Setting: Stop
Q1: E
Q2: a one
Q3: p, one

.2 Generation

Responses show generation of a single semantic feature with no elaboration.

Print Setting: No Parking This Side
Q1: DK
Q2: It's a back yard.
Q3: NR

Print Setting: For Sale
Bill Morrow
Q1: Neller
Q2: W
Q3: W, N, B, C, W

Note: Production of the name "Neller" earns this response a .2 as metalinguistic information does not constitute new semantic information.

4.3 (Continued)

9.0 SEMANTIC EXPANSION ACROSS QUESTIONS CONTINUED

.3 Maintenance

Responses show generation of a single semantic feature with some elaboration.

Print Setting: Jell-O
Q1: Strawberry.
Q3: pt
Q3: There's a strawberry on it.

.4 Expansion

Responses show generation of multiple semantic features.

Print Setting: Coca-Cola
Q1: cup
Q2: pop
Q3: (puts cup on head)

Print Setting: For Sale
Q1: Sign
Q2: The yard.
Q3: Move there.

Print Setting: Lego
Q1: Toys
Q2: Play with toys.
Q3: Make something.

Print Setting: No Parking This Side
Q1: B
Q2: A car, my mommy car. Her working. Car.
Q3: Mommy car.

4.3 (Continued)

10.0 AVAILABLE INFORMATION SOURCES - PRINT SETTING (Coded only in Stage 1): Describes those sources which are available to the language user in reaching a decision as to what the print says. (Multiple categories are recorded.)

.1 Print

Includes settings having letters, words, or larger units of language available to be processed.

.2 Numbers

Includes settings where numbers are not the central focus.

Print: 24 Grams Net Weight (Jell-O box)

Print: Evel Knievel Chopper #1 (Toy box)

Print: For Sale
Bill Morrow
Realtors
336-6311

.3 Pictures

Includes pictures whether or not they are part of the logo.

Print: Toss Across Game (Box shows picture of children playing the game)

Print: Lego (Box shows toys which can be made of Legos)

.4 Graphic Design

All graphics which have a characteristic design (logo) used to act as an identifying statement.

Print: Kroger Milk (Double Logo Involved--Blue Oval around Kroger and white outline around print as well as print style of Kroger itself reoccurs on Cottage Cheese containers and other Kroger products)

Print: Stop (Shown on Stop Sign--Print style on all road signs is highly stylized and reoccurring)

Print: Coca-Cola (Cursive script is always used with the print setting)

4.3 (Continued)

10.0 AVAILABLE INFORMATION SOURCES - PRINT SETTING CONTINUED

.5 Color

Checked when setting includes the use of selected colors which are associated with the referent item.

Print: Red, white, and blue (U.S. Mail logo)

Print: Golden Arches (McDonald's)

.6 Shape

Checked when setting includes information relative to form.

Print: Cup (McDonald's shown on side of cup)

Print: Box (Jell-O shown on the side of Jell-O pudding box)

Print: Box (Puffs shown on side of Puffs box)

.7 Situational Context

Visual cues external to the item.

Print: Stop
No Parking This Side
For Sale

(Because rather than show a real road sign or For Sale sign, children were shown a picture of these signs in a situational context. This context, then, is available for their use in making sense of the print setting.)

4.3 (Continued)

11.0 PERCEIVED/DEMONSTRATED INFORMATION SOURCES - LANGUAGE USER

Coded only in Stage 1; All C1 responses coded; Blank means item omitted): Describes those sources which the language user verbally or physically indicates are used in reaching a decision as to what the print says. (Coded when information is available from Q1, Q2, or Q3. Multiple categories are recorded.)

.1 Print

Reader 1: Sound the letters out.
Reader 2: The words.
Reader 3: T-O-S-S.
Reader 4: Name.
Reader 5: It says stop (pt to stop).
Reader 6: It says build something.
Reader 7: K
Reader 8: a 'p'

.2 Numbers

Includes responses to print where language user has renegotiated letters to numerals.

Print: For Sale
Bill Morrow
Realtors
332-6311
Reader: Numbers.

Print: Jell-O
Reader 1: Should be a telephone number.
Reader 2: 0-1-1

4.3 (Continued)

11.0 PERCEIVED/DEMONSTRATED INFORMATION SOURCE - LANGUAGE USER CONTINUED

.3 Pictures

Includes responses to print or logos where language user has renegotiated these items as a pictorial representation.

Print: McDonald's
Reader: It's like . . . a rainbow (reference to Golden Arches).

Print: Evel Knievel (box showing Evel Knievel on a motorcycle).
Reader 1: The motorcycle is popping a wheelie.
Reader 2: . . . by his sport jacket.

Print: Toss Across Game (shown on game box with picture of children playing game)
Reader 1: You stand on it.
Reader 2: You throw it like that.

Print: Lego (shown on box with toys which can be made from Legos)
Reader 1: Policeman (where reference is to picture on box)

Print: Burger Chef (shown on cup with Burger Chef hat logo)
Reader: The hat.

.4 Graphic Design

Print: McDonald's
Reader: It's like Ms (reference to chain of golden arches which encircle cup)

.5 Color

Print: U.S. Mail
Reader: Cause it's red and purple.

Print: Crest
Reader: Cause it's red, blue, I mean purple, blue . . .

4.3 (Continued)

11.0 PERCEIVED/DEMONSTRATED INFORMATION SOURCE - LANGUAGE USER CONTINUED

.6 Shape

Print: McDonald's
Reader: Cause it's a cup.

Print: Jell-O
Reader: A box.

Print: U.S. Mail
Reader: Because you put mail in it.
Reader: Mailbox

Print: Indianapolis
Reader: It's a sign.

Print: Evel Knievel Chopper
Reader: I think it says motorcycle. It comes out of a box.

.7 Situational Context

Includes responses which indicate that the research context has been used as a parameter for response.

Print: No Parking This Side
Reader: Car (in reference to cars in background behind picture of sign)

Print: Stop
Reader: These lights (referencing pole with reflectors in picture)

Print: Evel Knievel
Reader: Stuff from yesterday.

.8 Personal Experience

Print: McDonald's
Reader 1: You get a drink at Ronald McDonald's.
Reader 2: Cause my mom took me there once.

Print: Crest
Reader: You brush your teeth with it.

4.3 (Continued)

11.0 PERCEIVED/DEMONSTRATED INFORMATION SOURCE - LANGUAGE USER CONTINUED

.9 Non-Discriminated Response (Used only when 1-8 is not marked)

Response is sufficiently general that it is impossible to link it to any of the specific cueing systems.

Print: Lego
Reader: Toys.

Print: Puffs
Reader: They are tissues.

Print: Dynamints
Reader: They are candy.

Complex Example
Print: Kroger Cottage Cheese
Response Q1: Butter was in it.
Response Q2: You can read it by the way it is. And they typed, painted letters on it just like that Wendy's cup. They just painted letters on it to make it look like it's radiation that you drink out a cup, but it's not.
Response Q3: It's just that it has a circle around it (points to rim) and it's made like a basketball.
Coded: 11.1 "You can read it" (see Response Q2).
11.4 "letters" (see Response Q2).
11.4 "letters on it just like that Wendy's cup" (Q2 Response)
11.5 "painted letters" (Q2 Response)
11.6 "Butter was in it." (Q1 Response) circle around it (rim) (Q2)
11.7 "Wendy's cup" reference to research context items (Q2 Response)
11.8 "typed, painted" "like a baseball." (Q3 Response)

4.3 (Continued)

12.0 USES LANGUAGE ABOUT LANGUAGE: Records instances of language use which describe or reflect upon the systems themselves. Code for all Stages. All Cl responses coded.

NOTE: Child's using "say" in a response does not constitute use of metalinguistic language.

.1 Yes

Reader 1: I can't even read that.
Reader 2: I don't know that word.
Reader 3: I don't know what it is, but there is a 't' in it.
Reader 4: B-Nobody-Nobody-y (spelling out)
Reader 5: That a 't' in my word.
Reader 6: That's a short sound for a long word.
Reader 7: Well I say the 'ple' and I added the p, e, o, and I knew it was 'people'.
Reader 8: K
Reader 9: a 'p'
Reader 10: Name
Reader 11: Read
Reader 12: zero is for numbers
Reader 13: One [in reference to the '1' in Mail]

5.0 CHILDREN, THEIR LANGUAGE AND WORLD: AVAILABLE PERSPECTIVES, INTERPRETATIONS, AND IMPLICATIONS

The articles and speeches included in this section were written over the course of the funding period. Some of these speeches and articles appear in print elsewhere. They are included here for easy reference and, as such, document changes which have occurred in our thinking over the course of this program of research. Readers interested in mapping these changes may find it helpful to read this section of the report prior to reading Section 2.

5.1 CHILDREN'S LANGUAGE AND WORLD: INITIAL ENCOUNTERS WITH PRINT

Jerome C. Harste
Carolyn L. Burke
Virginia A. Woodward
Indiana University

*Article prepared for Bridging the Gap, Author Meets Reader (J. Langer & M. Smith-Burke, Eds.), Newark: International Reading Association, 1981.

A list of significant research which has yielded insights in the area of written language growth and development among preschool children would have to include the following:

- Marie Clay's (1975) research which demonstrates that very young children are busy discovering written language for themselves--from the inside out, so to speak--long before formal instruction has begun;
- Charles Read's research (1975) which explicates a part of this process; namely the rule-governed relationships which children generate in their invented spellings;
- Ingrid Ylisto's (1967) research in early reading which demonstrates that the young child approaches print with an expectation that it be meaningful;
- Dolores Durkin's (1963) research which found that early readers tend to be early scribblers;
- Emilia Ferrierro's (1978) research with preschool children from Mexico which demonstrates that Clay's, Read's and Ylisto's written language findings are not only true for preschool children of highly literate parents, but also true for preschool children of the slum whose parents are illiterate.

5.1 (Continued)

Research studies such as these are extremely important. In a very real sense one cannot hope to adequately address the issue of optimum instruction at any level without knowledge and understanding of the natural process of written language growth and development.

The research reported in this paper is best viewed as an attempt to further flush out understanding of this process. The major aim being the identification of early and universal language learning strategies for the purpose of reconceptualizing written language growth and development.

A single attitude governed our initial conceptualization of research in this area; namely, that written language growth and development parallel oral language growth and development. Put generally, we hypothesized that what was known about oral language growth and development would prove useful for understanding written language growth and development.

In this regard the work of M. A. K. Halliday (1975) was especially seminal. Not only had Halliday demonstrated that all the written language insights listed above were true for oral language growth and development, but further he added a theoretical perspective; one built on the fact that language is inherently social. Using this perspective, Halliday concluded from a longitudinal study of his son, Nigel, that oral language development might best be described as a "saga in learning to mean." Like Ylisto, Halliday found that meaning, or semantics, was the driving force in language growth. It was from discovering what

5.1 (Continued)

language did (both semantically and pragmatically) that children came to discover its form (both syntactically and graphophonemically).

With this background in mind, the major premise of our research became one meant to elevate the notion of context to the forefront; namely, that written language growth and development is a socio-psycholinguistic process.

WRITTEN LANGUAGE GROWTH AND DEVELOPMENT: A SOCIO-PSYCHOLINGUISTIC PERSPECTIVE

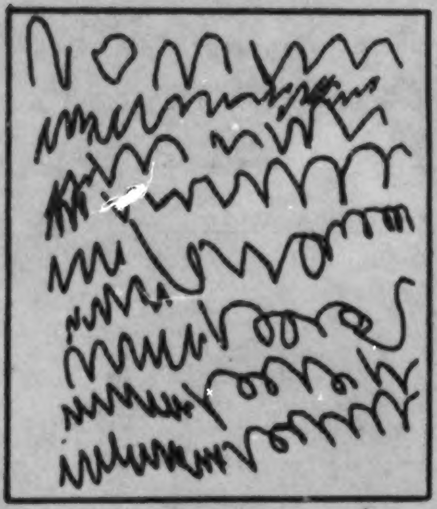
In order to understand the cognitive and linguistic processes involved in reading and writing, one must do so in light of the linguistic, situational and cultural context in which the processing occurs.

Probably no data more cogently illustrate the socio-psycholinguistic nature of the written literacy process than do those illustrated in Figure 1, collected from 3 four-year-olds attending a preschool program in which many foreign college students enroll their preschoolers. These uninterrupted writing samples were collected from each of these children individually under the condition, "Write everything you can write."

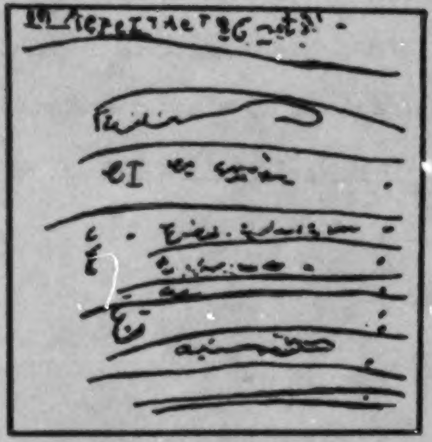
Interestingly, in contrast to the other samples, Dawn's scribbles look undeniably English. When Najeeba finished her writing she said, "Here, but you can't read it, because it is in Arabic." Najeeba then went on to point out that in Arabic one uses "a lot more dots" than in English. Dalia is an Israeli child whose whole writing bears the predictable look of Hebrew.

5.1 (Continued)

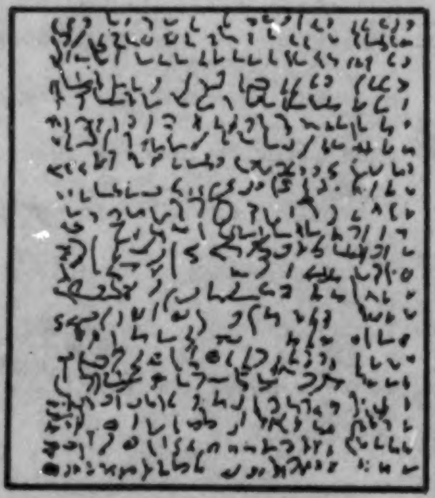
5.1 Figure 1. Uninterrupted Writing Samples from Three Children Age 4



Dawn
United States



Najeeba
Saudi Arabia



Dalia
Israel

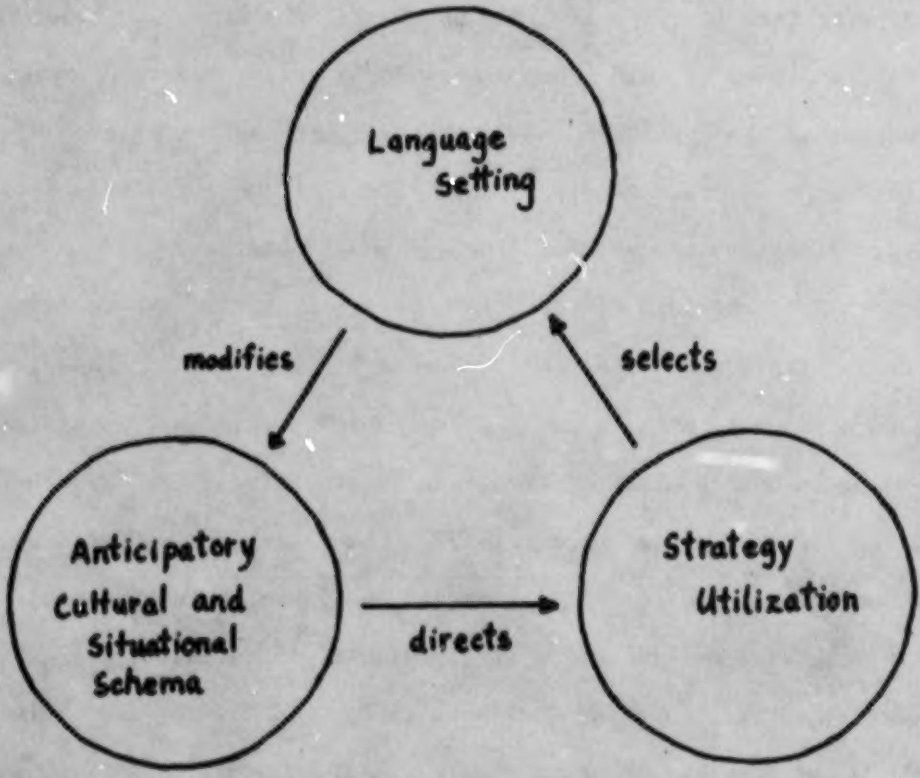
5.1 (Continued)

From on-going encounters with print in each of their respective early written language environments, these children have developed obvious and identifiable expectancies for print. Clearly, in order to understand the cognitive and linguistic decisions which each of these children made one can only do so in light of the sociolinguistic context of their early written language environments.

The model in Figure 2 illustrates what this thesis means conceptually. This model poses a transactional view of the process; involving both a language setting and a mental setting with each in a sense providing an environment for the other (Rosenblatt, 1938, 1978; Harste & Carey, 1979; Carey & Harste, 1979). "Language Setting" as a concept is meant to suggest that any instance of language (either oral or written) contains multimodal cues (linguistic, situational, and cultural) available for processing (Neisser, 1976). In considering a given text, where the language is found (home, school, store), in what culture (United States, Israel, Saudi Arabia), and for whom and by whom it was produced (peer, superordinate, subordinate) modify not only what schema are accessed but direct strategy utilization and hence sampling of the print setting itself (in reading), or what information is recorded (in writing). Strategy utilization in both reading and writing, from this perspective, differs not only given one cultural setting as opposed to another, but from alternate language settings within that culture.

5.1 (Continued)

5.1 Figure 2. A Socio-Psycholinguistic View of the Language Process


Language Setting
modifies
selects
Anticipatory Cultural and Situational Schema
directs
Strategy Utilization

What makes the multicultural data in Figure 1 so exciting from a written language growth and development perspective is that here is vivid evidence that (a) written language, like oral language, is learned naturally from on-going encounters with print; (b) children in literate societies are actively involved, at a very young age, in understanding and controlling their worlds of print; and (c) children's perceptions of print are not only organized, but systematic and identifiable through the strategies they employ in producing written products.

5.1 (Continued)

EXPLORING WRITTEN LANGUAGE GROWTH AND DEVELOPMENT

To formally study the strategies used by preschool children approaching written language we developed several research tasks. Task 1 - Environmental Print was a further adaptation of a procedure initially developed by Ylisto (1967) and later refined by Yetta Goodman (1976). This task involved 3 stages. In Stage 1 children were shown print in context, such as Crest on a toothpaste carton. In Stage 2 the word Crest was taken off the carton and placed on a 3 x 5 card. (Thus in Stage 2, children had all of the cues associated with the graphic systems in the original condition including shape, color, and style). In Stage 3 the word Crest was typed in mixed primary type on a 3 x 5 card. For each item of print, children were asked 3 questions: (1) What do you think this says?, (2) Where do you think it says it?, and (3) Tell me some of the things you know about this.

Task 2 - Language Experience Story Dictation and Reading involved giving children a shoe box of toys ranging from a toy truck to a spool of thread and asking them to select three items with which to tell us a story. Stories dictated by the children were transcribed by the researchers during telling with care taken to maintain the children's language patterns. Upon completion of the story, children were given the transcription and asked to read the story to the researcher. One day later children were asked to reread the story from a copy of the story dictation.

5.1 (Continued)

Task 3 - Uninterrupted Writing involved giving children a blank sheet of typing paper and asking them to write their name and anything else that they could write. At each point that the child stopped writing we repeated the direction, "Write everything that you can write." This procedure was continued until the child self-terminated the task by saying such things as "That's all," or "I can't write anymore." Once the task was terminated, children were asked to read what they had written back to the researcher.

To illustrate how data we collected support the major thesis of this study, selected data from 3, 4, 5, and 6-year olds across these tasks will be presented. Data selected will be reported in the form of language stories and organized in terms of the 4 major strategies identified and the conclusions reached.

EXPECTING PRINT TO BE MEANINGFUL: THE STRATEGY OF SEMANTIC INTENT

All children in our sample demonstrated an expectation that written language would make personal sense. Children seem to discover early that written language is functional. And this is reasonable. If this were not the case, there would be no reason for its development and presence in societies (see Goodman and Goodman, 1976, for an excellent discussion of this issue). It is this dimension of functionality which also makes written language predictable. We do not encounter "Baskin Robbins" on a shoe store, nor the sign, "Shoe Store" on an

5.1 (Continued)

ice cream parlor. The print we encounter makes sense in terms of its context.

From our data it is not clear how or when this notion of semantic intent develops. It may be that semantic intent is simply a natural extension of a more generic strategy used by children in discovery of the world; it may be a strategy developed from encounters with oral language and freely applied to written language. These are important questions which need further investigation. For now, all we can say is that children as young as 3-years old demonstrate application of this strategy when approaching written language and as such "semantic intent" represents a true language strength which can be used in their continued discovery of the predictability of print. Just as form follows function in oral language development (Halliday, 1975), so too, these data suggest, the same principle operates in written language development.

Access to the semantic system of language is not just reading related behavior, but constitutes real access to literacy, as it is from this access that further orchestration of the written language event occurs. To illustrate the practical implication of this strategy and its importance developmentally four language stories are presented.

Nathan and Crest. Nathan's story takes place in Stage 1 of the Environmental Print Task when we showed him the Crest toothpaste carton and asked, "What do you think this says?"

Nathan, with almost no hesitation, responded, "Brush teeth."

5.1 (Continued)

In order to fully appreciate Nathan's response, one must perhaps think of what alternative he might have said: "Once upon a time . . . ," or "336-6923." Nathan, however, doesn't respond with any of these, but rather with "Brush teeth." In doing so Nathan demonstrates that he not only knows how written language works, but further that he knows how it works in relationship to context. The Crest manufacturers could have named their product functionally in terms of what one does with it; namely, brush teeth, but elected not to do so. Many other manufacturers have elected to name products using this functional description option, i.e., "Mop & Glow," "Spray & Wash," "Stop & Go." So Nathan's option isn't so bad. It falls within the semantic parameters which we as adults use to label print in the environment. Not only is it predictable, it's fairly sophisticated. "Brush Teeth" is about the right kind of written language phrase length for use when naming environmental print. What we see then in Nathan's response is an expression of the whole notion of context in text. You can demonstrate this for yourself. Type or print "Brush Teeth" on a 3 x 5 card and ask your friends to tell you the conditions under which they would expect to encounter this piece of language.

The reason each of us can reinstate an appropriate context not only for Brush Teeth but for each of the responses which we listed as ones Nathan might have given, is that within each text--whether oral or written, likely location, and by whom and for whom it was produced,

5.1 (Continued)

is an expression of context.

Conceptually, Nathan's response, "Brush Teeth," conjures up the specific whole world image of someone standing in front of a sink in the act of brushing teeth. It is important to note that the response which Nathan gave is dynamic, capturing relationships between whole world objects and events, even though what was shown him was a static logo on the side of a box. From the static information which was available in the impulse of light which he received (and we must remember that perception and cognition are quite different than the information--light impulses--on which these processes are based), Nathan was able to construct a very real sense of situation.

Nathan's response was personal, suggesting that he assumed that the print shown him would be meaningful in terms of his world and what he knows. This anticipation, or expectation, of written language is what we term "semantic intent." Semantic intent is an important and early strategy within the young child's personal model of reading and writing.

The composite of what the child has discovered about written language can be thought of as a personal model; the sum total of those strategies which the child has acquired and which allow anticipation and cognition. It is important to understand that the term model is used in its denotative sense, as a set of assumptions through which experience is perceived and acted upon. We see the notion of semantic intent as an important component of the young child's model of reading

5.1 (Continued)

and writing. Having once acquired this strategy, the child is literally free to self-discover other regularities which written language possesses. This is, however, more clearly illustrated in the 3 remaining stories which follow.

Boyd and Dynamints. The second language story involves a 3-year old called Boyd; same experiment, same condition, different item of print.

We asked Boyd, showing him a package of Dynamints, "What does that say?"

He responded, "Fresh-A-Mints!"

One can almost feel the Dynamints bursting forth with flavor in Boyd's mouth! From visual cues available in the optic array Boyd, too, was able to create a sense of situation.

Boyd's story, like Nathan's, illustrates the notion of print processing as a semantic transaction involving the strategy of semantic intent.

Unlike the first example, however, Boyd's response (Fresh-A-Mints for Dynamints) seems at least in part controlled by the graphic display with which he was presented. While this may have been accidental, we had too many of these kinds of "accidents" happen for us to accept this explanation. We suspect, rather, through application of the strategy of semantic intent the child is allowed opportunity to

5.1 (Continued)

discover the regularities of alternate print forms, reach generalizations and begin the orchestration of information available in other available language systems: How this process works is illustrated in the next language story.

Alison and the McDonald's Cup. This language story also takes place in Stage 1c of Task 1 of the experiment described earlier.

We showed Alison, age 4, a McDonald's cup and asked her, "What does that say?"

Alison had decided that we liked pointing so she took her finger to the line of print that read, PLEASE PUT LITTER IN ITS PLACE and began to say, "McDonald's." Before she got the "Mc" out, however, she moved her finger down to McDonald's and said, "McDonald's" emphasizing the Mc and the Donald's. She looked at the cup a moment and then turned to the examiner and said, putting emphasis on the Mc, "Do you know why they call it McDonald's?" "No," the examined said, "Why?"

"Because they wanted it to read McDonald's," came the response.

The examiner followed by asking, "Where does it say Mc?" Alison took her finger and pointed to Mc and once again followed by saying, "McDonald's," with perfect morphemic synchronization between hand and voice.

A great deal transpired during this brief sequence. Clearly one gets the feeling that Alison knows a good deal about letter and sound relationships at her young age, or why else, we must ask ourselves,

5.1 (Continued)

would she have rejected PLEASE PUT LITTER IN ITS PLACE as saying McDonald's? Alison anticipated the response "McDonald's," but when she went to point it out, the information in the optic array (PLEASE PUT LITTER IN ITS PLACE) did not jibe with the features of the language form which she too must have anticipated. She begins a perpetual exploration of other print on the cup. Upon finding McDonald's she elects it as a better match both in terms of anticipated message and form.

The monologue involving the Mc in McDonald's is interesting and illustrates both the power of observation and the type of language hypothesis testing in which young children engage (Smith, 1978). No one has to say to Alison whether she's right or wrong; the information available in the optic array allows her to check her own hypothesis and thus gain control of written language form.

It is important to note in this language story that it was Alison's functional expectation for print which initiated and thus permitted her exploration and growing control of the language form. The predictability of the print setting in terms of what Alison knew about her world allowed this language growth. Just as it is not accidental that print in a literate society is functional, so too it should not surprise us that it is this element of functionality which makes print settings predictable and becomes key to written language control. A more explicit instance of how this process leads to linguistic awareness is illustrated in the next language story.

5.1 (Continued)

Alison and the Wendy's Cup. We asked Alison, showing her a cup from a Wendy's restaurant, "What does that say?"

She responded, running her finger under Wendy's by saying "Wendy's" and under Hamburgers by hesitating and then saying, "Cup."

Alison then looked at the experimenter and reflected, "That's a short sound for a long word."

This language story again demonstrates the notions of semantic transaction and hypothesis testing. One can see in Alison's response an expectation, discovered about language from encounters with oral and written language, between sound length and graphic display. She seems puzzled by the incongruency and so mentions it, thereby indicating that despite its irregularity, semantically it makes sense and hence is acceptable to her. While this strategy may lead to a moment of doubt, it serves her well. Alison seems to be testing the semantic priority principle of language in this setting. In subsequent encounters with print she can and will continue to apply, test, and refine this language principle. It is Alison's confidence that this print setting has got to make sense--indeed does make sense--that allows her the opportunity to implicitly draw a generalization about written language form.

5.1 (Continued)

ACCESSING ONE'S COMMUNICATION POTENTIAL: THE STRATEGY OF NEGOTIABILITY

Children freely utilize what they know about alternative and available communication systems to make sense of their world including their world of print. The three language stories included in this section demonstrate the cognitive flexibility which young children display in an attempt to make meaning from information available in the optic array. Alison, Megan and Mara utilize all they have learned, not only about print but also about the mathematical and artistic communication systems in their search for meaning. Jenny Cook-Gumperz (1977) terms such cognitive flexibility "negotiability" to capture the child's willingness to use any available communication means in the interest of maintaining the message. Its intuitive use by children argues strongly for the existence of a generalized communication potential out of which more specialized communication systems are generated.

Alison and Jell-O. We showed Alison the word Jell-O in mixed primary type (Stage 3) and asked, "What does that say?"

Alison hesitated a moment, shrugged her shoulders, and then said, "I don't know, it should be a telephone number."

In order to make this response, Alison obviously had transformed the two l's into ones and the O into a zero. Whether it was the hyphen which triggered this transformation is hard to determine,

5.1 (Continued)

just as it may have been the difficulty of changing the J and e which made her tentative and conclude that "it *should* be a telephone number."

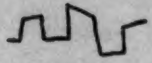
Alison, in this instance, freely utilizes all she has learned, not only about print but also about the numerical communication system to make sense of the print she is presently encountering. Negotiation, in this sense, is a marshalling strategy which makes available all of the resources she possesses.

Conceptually one might think of the language user as having a base of knowledge consisting of information acquired from encountering the mathematical, linguistic, artistic, dramatic, and other communication systems which abound in our world. This base of knowledge represents in a sense one's communication potential. Negotiability is the strategy which allows us to use this potential in an attempt to express what we wish to mean.

We see negotiability as an important strategy in written language growth and development. In a sense negotiability represents the child's self-discovery that what is known about one communication system can support growth and development in other communication systems. How this process works is more clearly illustrated in the language story which follows.

Megan's Present. Megan, age 4, in Task 3 - Uninterrupted Writing wrote her name supposedly, on the top left-hand corner of her paper, spelling it O-K-U-N-V-L-O. Then turning her paper on its side, she

5.1 (Continued)

added A-O-A-M-K working right-to-left so the final product was reversed by adult standards. Still writing with the paper sideways, Megan drew a castle-like outline across her paper, like so:  . Megan then proceeded to draw a topdown view of a present, replete with ribbon.

After pausing a moment she announced, "That's all."

The researcher asked Megan to read what she had written.

Megan said, pointing to where she had written her name, "This is how I write my last name."

"And this," pointing to K-M-A-O-A, "is my nickname, Angel."

"And this is sort of castle."

"And this says present."

She then proceeded to color her present in with black ink--first the package, then the ribbon--making the whole thing one black blob.

After observing her handiwork, Megan reflected a moment and said quite emphatically, as much to herself as to the researcher, "No, it doesn't!"

Snatching the pen again she wrote P-K-P-L and announced, "Now, *that* says present." (The emphasis is Megan's.)

Interestingly, when we asked Megan to write her name on a subsequent task she promptly wrote her name, M-E-G-A-N.

Megan, like most children in our sample, was not intent upon impressing us with a demonstration of what it was she knew. This,

5.1 (Continued)

like any other setting, was simply an opportunity to engage in the process; to experiment, to test hypotheses.

Megan freely moves to an alternate communication system to express herself. Presenting what she wanted to say in art--her drawing of the present--and then being requested to read what she had written, permitted her to place-hold her thoughts and in the end write P-K-P-L. In so doing, Megan's performance not only demonstrates the notions of negotiability across communication systems, and how it is that growth and development in one communication system supports growth and development in another system, but further suggests that Megan's knowledge of grapheme-phoneme relationships is both extensive, organized, and systematic (note for example Megan's decision to begin her nickname Angel with an "A" and present with a "P"). (For an extensive discussion on graphophonemic rules known by school-aged children see Read, 1975). In Megan's response one gets the clear notion that what she has discovered about language is not isolated bits and pieces of language data, but a series of interrelated strategies which allow her first and foremost to mean. Negotiability is in this sense a meaning based problem solving strategy as Mara's language story so cogently demonstrates.

Mara's Writing. We asked Mara, age 5, to write everything she could write.

Mara began by writing her name, then paused, and said, "Can I write names I know?"

5.1 (Continued)

The examiner responded by repeating the direction, "Write everything you can write."

Mara wrote L-A-U-R-A directly under Mara.

Moving down the page in column-like fashion Mara wrote L-A-U . . . paused and asked, "What comes after the 'u' in Laurie?"

The examiner said, "Just do the best you can. Write everything you can write."

Mara finished Laurie spelling it L-A-U-I-E, and then added M-A-R-Y and B-E-T-H, announcing the latter to be her mother's name.

Mara then took a long pause, drew a line under the word Beth and announced, "Next I'll write some words I know."

Mara proceeded again making a column, writing Y-E-S (with a backwards "S"), N-O (with a backwards "n"), O-N (with a backwards "n"), L-O-V-E, Y-O-U, and I-N (reversing the letters and making the "n" backwards).

Mara studied her in and said, "I think that's backwards. Is that backwards?"

The examiner responded, "Just do the best you can. I want you to write everything you can write."

Mara, at this point, accepted her in as written, drew a solid black line under it and stopped.

After thinking a bit, she announced, "I can write numbers," and proceeded to write her numbers 1 to 30 in a column under her word list. Reaching the bottom of the page with the number 9, Mara started a

5.1 (Continued)

second column and wrote numbers 10 to 30 in it.

Mara made all of her 3's, 7's, and 9's backwards. Some of Mara's 2's were written correctly, but others incorrectly. Never batting an eye, Mara wrote the number 22 such that it contained both a conventionally written 2 and a backwards 2. Fours also presented problems, as did 6's. All numerals were recognizable, despite the seemingly untrustworthiness to Mara as to which direction they went.

When Mara finished writing numeral 30, she announced, "That's all I can write."

Mara read what she had written with no difficulty.

Mara's language story provided a nice contrast to those entitled Alison and Jell-O and Megan's Present. Mara is, of course, older than Alison or Megan. She is also, in many ways, wiser and less of a risk-taker. She now knows there is a correct and an incorrect form. To be safe she sticks with what she feels she knows. The result makes Mara's performance more hesitant and less free than that of Megan's or Alison's.

Mara's performance also demonstrates what the older child's base of knowledge may look like. Mara has clearly separated data appropriate to alternate communication systems. The information she possesses in her knowledge base is, in this sense, tidier. She too freely goes to an alternate communication system to give her the needed support to complete the task set before her. Alternate communication systems are

5.1 (Continued)

for her a resource, a communication potential, much as they are for us when we accompany written text with diagrams and pictures, or oral text with gestures.

ORCHESTRATING THE WRITTEN LANGUAGE EVENT: THE STRATEGY OF HYPOTHESIS-TEST

If one views each instance of written language as the orchestration of a complex social event, then what the initiate written language user is faced with is a problem of some magnitude. As varied elements in this event are perceived, new hypotheses must be generated and tested. These hypotheses are concerned with pragmatics (what language for what context), semantics (how can I say what I mean), syntax (how do I get the flow of my message captured on paper), graphics (how do I place-hold what I wish to say), and the orchestration of these systems (how do I synchronize these sytems). Within each of these areas there is, of course, a range of hypotheses which need formulation and fit. Additional hypotheses arise as more and more elements are orchestrated.

From this perspective what should surprise us is the impressive amount of mastery that both we and young children display across alternate written language settings. Truly the most salient feature of any language user's response to written language is the on-going hypothesis testing which it displays. For the proficient written language user, hypothesis-test is not only a strategy, but a risk

5.1 (Continued)

taking attitude of, "I can find out."

To fully appreciate the powerfulness of this strategy and its net effectiveness one has to be impressed with the multifaceted aspects of mastery displayed in the response we have already examined.

While the written language event may seem complex enough on its own, intervention by helpful adults may only make the event more complex, convincing children to trade in their personal strategies for those of instruction. Having recognized the complexity of the process, educators have often taken this to mean that it must be simplified for the initiate user. But this is misguided. As these language stories show, it's not the complexity of language which is the problem, but rather that language in its natural complexity supports control.

Leslie and the Crest Carton. We showed Leslie, age 6, a carton of Crest toothpaste (Stage 1) and asked, "What does that say?"

Leslie, hesitating a total of 5 seconds--during which time she seemed fidgety and uncomfortable--finally produced, "Cr-Cr-ost."

When urged to tell us where she'd seen this before, Leslie responded, "In the stores."

When further urged to tell us anything else she could about this thing, Leslie responded, "It's a toothpaste. It comes in big and small and you can brush your teeth with it."

Later, during a home interview, we asked Leslie's mother what brand of toothpaste the family used. She responded, "Crest. We always have."

5.1 (Continued)

Leslie's behavior, like Mara's, seems cautious and as such stands in stark contrast to that of Nathan's, Boyd's, Megan's, and Alison's. Interestingly, we found that children 3 and 4 years of age responded rapidly to the Crest carton with responses such as "Brush teeth," "Toothpaste," and "Crest." Children 5 and 6 years of age hesitated longer than the 3 or 4 year olds and often seemed reluctant to respond, "Toothpaste" or "Colgate." Despite differences in response time, we seriously doubt that 5 and 6 year olds in our sample knew less about language than did 3 and 4 year olds; rather, we believe, this phenomenon to be an artifact of more language information. With more information to consider, response time seems measured.

Four of the five 6-year olds in our study were in the first grade where they were receiving phonics instruction in vowel and letter names. Each of these children--and this data was collected only 22 days after the start of school--responded to the environmental print in Stages 1, 2 and 3 by sounding out the word. Most of these children, when shown Crest for example, hesitated and responded, "Cr-Cr-Cr-Toothpaste," or made a similar response.

It is interesting to note that in the final analysis most 6 year olds selected a semantically acceptable response after initially focusing on the graphic information available. One cannot help wondering, however, how long it would take these children to abandon what they knew about language to favor instead the phonetic strategy being emphasized in their instructional program (like Leslie's "Crest").

5.1 (Continued)

This experience raises in our minds, at least, the possibility that the high incidence of nonsense word production found among beginning first and second grade readers (Biemiller, 1970; Barr, 1974-75; Cohen, 1974-75) may simply reflect their instructional history and may not represent natural development at all. Six year olds in our study, at least, appear almost too trustworthy; all too willing to turn in the strategies they have discovered about language for those which their teachers, operating from an alternate theoretical model of the process, emphasize in instruction. This may be, in the final analysis, the most serious consequence of formal language instruction which fails to build upon the young child's natural language understanding. In contrast, Dawn's language story illustrates the hypotheses children test on their own, and in so doing make the instructional one being tested by Leslie under the guidance of instruction pale in sophistication and orchestration.

Dawn's Writing. We asked Dawn, age 4, to write everything she could write (see Figure 1 - United States example).

Dawn began by writing what looked like an "N", and "O" and an "M" and then proceeded to do what some have termed "scribble drawing," left-to-right, line-for-line, down the page. When Dawn had completely filled the page, the examiner asked her to read what she had written.

Dawn read, pointing left-to-right and moving top-to-bottom, "My name is Dawn. I go to University School. I used to go to Children's Corner. My brother Timmy goes to University School too," making sure

5.1 (Continued)

that when she came to the final "too" in her story she was on the bottom utmost right-hand corner of the page.

Later, when we askad Dawn to write her name and draw a picture of herself so that we could remember her, she did so spelling her name D-A-W-N very clearly and correctly.

Dawn's performance is impressive, especially in light of the fact that many early formal language programs feel these skills must be taught to children two years later. Not only do Dawn's "scribbles" look distinctively like English cursive writing, but further they demonstrate Dawn's control of left-to-right and top-to-bottom directionality.

Probably the most interesting element of Dawn's performance is her unique attempt to capture on paper the flow of language. From other samples of uninterrupted writing, we have ample evidence that on other occasions Dawn wrote letters and words. In this instance the process of writing letters and words stood in her way of producing a message, and so Dawn freely tests an alternate form of expression using the English graphic-like forms she has acquired from past encounters.

Dawn's performance suggests that this is an important developmental stage reflecting an equally important strategy which some children develop to handle syntax or the flow of language. Calling their performance "scribble drawing" may demean both its function and significance in terms of language learning. Our data clearly challenge both the "scribble" and "drawing" conceptualizations undergirding this

5.1 (Continued)

term and suggest instead that this behavior provides important insights into new language hypotheses being tested by the child. Dawn clearly understood the function written language serves. Given this context she produces, as we can tell from her reading, an appropriate text. It is her focus on pragmatics and semantics which allows her the opportunity to test an alternate and more economical form. What looks like "scribble drawing" from one theoretical perspective marks development from another.

Mary Hill (1978), one of our doctoral students, has as a result of the many questions which our data raises, collected uninterrupted writing and reading samples from four 3-year old children over the past year and one-half. Her data supports what we suspected; namely that "scribble drawing," rather than reflecting a pseudo-writing behavior, represents, in fact, a much later developmental stage--one that appears long after the child has begun experimenting with letters and other recognizable but representational place-holders for meaning.

THE LINGUISTIC DATA POOL: STRATEGY OF FINE-TUNING LANGUAGE WITH LANGUAGE

Children's functional spellings indicate they not only spell the way it sounds, but the way it looks and means. Take for example these spellings: F-L-I-Y-I-N-G for flying and A-L-I-N-O for a lion (Jason, Age 6). In each of these instances there is a close sound/ graphic match indicating the rule-governed relationships these children

5.1 (Continued)

have developed between speaking and writing. But equally interesting is the inclusion of the Y in flying and the addition of the O in lion. Clearly these do not reflect sound patterns solely or there would be no reason why the child added an O to the end of his spelling of lion or failed to add just another I in his spelling of flying. Rather, what is reflected in these instances is visual memory or more simply the child having seen the word in reading. Such instances as these stand as stark testimonial to the interrelationships between reading, speaking, listening, and writing. They are blatant cases. More subtle examples include any instance of invented spelling--as these involve letters which must previously have been perceived (or read) by the child, as well as the early writing effotts of Dawn (Figure 1)--or there is no way to explain their English-like graphic features when compared to those of children from other societies.

The single language story included in this session strongly suggests that oral and written language grow and develop in parallel rather than in serial fashion. The instructional assumption that the expressions of language are develomentally ordered from listening to speaking to reading to writing needs further examination in light of these findings. Data collected from the children in our sample, as illustrated in the following language story, demonstrates the relationship between the various expressions of language are both more interesting and complex than a serial-development hypothesis would suggest.

5.1 (Continued)

Alison's Turnip Story. Data presented in this section were collected in Task 2 - Language Experience Story Dictation and Reading from Alison when she was 4.1 and again when she was 4.6.

On the first occasion Alison selected an eraser (which she imagined to be a stop sign), a little plastic truck, and a spool of thread. The story which Alison both enacted with these objects and dictated follows:

> Once there was a needle of thread. When he was walking along he found a car driving. He jumped over the car. And when they came to a stop sign they found it wasn't a stop sign.

Reading her story immediately after dictation, Alison produced:

> Once there was a little needle of thread walking along the road. Suddenly she came to a car and she jumped over it. When she came to a stop sign she found it wasn't a stop sign.

Rereading her story one day later, Alison produced:

> Once there was a needle of thread and he was walking along. He found a car driving. He jumped over the car and when they came to a stop sign they found it wasn't a stop sign. The end.

On the second occasion, 5 months later, Alison again selected the spool of thread but then ventured off to select a paint brush and some play money with which to tell her story. In dictating her story she freely assigned these objects alternate roles (Turnip, Grandma, Granddaughter, Puppy, Beetle) so that she could enact her story as she told it. Her story as dictated follows:

5.1 (Continued)

Once upon a time there
was a turnip. The
granddaddy came out and
tried to pull out the
turnip. He called the grandma
and they both tried to
pull out the turnip. The
grandma called the granddaughter
and they all three tried to
pull out the turnip. The

---

granddaughter called the puppy.
They all four tried to pull out
the turnip. The dog called
a beetle. The other beetle called
another beetle and another beetle
called another beetle. And all
seven tried to pull out the
turnip. They all pulled out the
turnip.
The end.

When she completed dictating her story, Alison was handed the pages of her story and asked to read them to the researcher. Although her turning of pages failed to correspond to what she was reading, Alison's rendition was surprisingly close to the dictated text in terms of both semantic and syntactic structure.

One day later Alison was again asked to read the story she had written.

Alison responded, "But I don't remember what it is about."

The examiner paused, waited and finally putting Alison's story in front of her said, "Well you just do the best you can."

Alison, glancing at the text, pointed to the t-u-r-n-i-p in the middle of line two, and announced, "Oh, now I remember . . . turnip."

5.1 (Continued)

Alison's second rendition of the story was like the first, very close to what was dictated both semantically and syntactically, although once again her turning of pages failed to correspond with what she was reading. (Alison did, however, turn to the last page once she realized her story was ending.) Alison added even another beetle in her second reading, having either forgotten exactly how many she included in her first story or wishing to prolong the experience as much as possible.

In light of Alison's reading and page turning behaviors, it is unclear what role graphics played in her reading and rereading of these texts. Clearly, given her need to see the word turnip to recall her second story, graphic information played some role.

Even though she added a story sequence in her second reading, Alison's renditions of her texts are surprisingly like the originals, reflecting a respect for the texts generally during both readings. While Alison demonstrates she sees print as controlled, she is not controlled by print; semantics or meaning rules! Interestingly her behavior reflects the give-and-take with print characteristics of strategies displayed by sophisticated readers (Rosenblatt, 1978).

Alison's second story structure is particularly recognizable as that underlying the children's literature selection, The Great Big Enormous Turnip (Tolstoy, 1968). Yet, what seems important is not the similarities in story so much as the differences. Alison's story is clearly a new event, and new text; just as distinctive as the original.

5.1 (Continued)

What she has borrowed is a story structure or ideational scaffolding. Past encounters with literature have given her the necessary frameworks for presentation of her texts. Both of Alison's stories introduce a protagonist, initiating event, and an attempt (Stein, 1978). These higher-order cognitive schema not only assist Alison to organize her ideas for presentation, but further facilitate her reading and re-reading.

Alison's reading of her stories was controlled and, unlike her general speech, indicated a cognizance on her part that written language differs from oral language in distinctive ways. Obviously, it was Alison's presence at alternate language encounters (speaking, reading, writing, listening) which allowed her the opportunity for making this discovery and developing this control.

Cogently, Alison's performance demonstrates the interrelatedness of growth in the language arts. Information received via one expression of language (for example, story structure schema via listening to stories) became available data for output in another expression of language (writing via story dictation).

What children learn from reading becomes, in likewise fashion, available linguistic data for oral language development and control. One can get a feel for this interrelationship in Alison's story dictation, as Tolstoy's structure clearly provides her a workable strategy for her own language story dictation.

5.1 (Continued)

ON STRATEGIES: SOME CONCLUDING REMARKS

Less it not be clear, two things remain to be said. First the strategies of semantic intent, negotiability, hypothesis-test, and fine-tuning language through language are not separately employed but rather complementary and synergistic. Second, we believe these strategies are universal and undergird the writing of all of us, not just the initiate written language user. They are in this sense not truly developmental, but basic strategies, discovered early, which undergird written language literacy.

The validity of this first tenet lies in each of the language stories presented. The second statement, we do not have time to prove in this paper but its importance is apparent.

Having said this much, however, is not enough. It remains the business of the final section of this paper to tie these findings to the theory from which they sprung. It is only in this way that subsequent research and practice may be effected.

CONCEPTUAL AND INSTRUCTIONAL IMPLICATIONS

Preschool children, when shown the official United States Post Office logo and asked, "What does that say?" responded:

"A birdie flew." (Nathan, Age 3)
"American Picture Sign." (Alison, Age 4)
"Put in mail." (Jonathan, Age 5)
"U.S. Mail." (Emily, Age 6)

5.1 (Continued)

A behavioral interpretation of these responses may lead some to conclude that Nathan, Alison, and Jonathan are "non-readers," while Emily is a "reader."

Although it is true that Emily's observed response, "U.S. Mail," matched the print on the logo, while Nathan's, Alison's and Jonathan's did not, to note such gross differences in these response products is, we wish to argue, to miss the monumentally more important similarities in the process which each went through in order to respond in the manner they did.

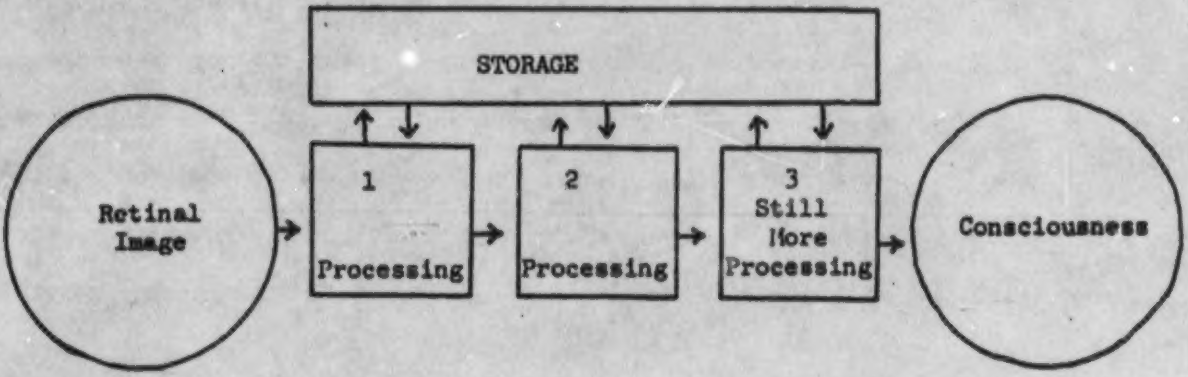
In both Nathan's and Jonathan's cases, their responses, respectively, conjure up specific whole world images of a bird flying and a letter being mailed. Alison's response is equally interesting. Clearly her response, "American Picture Sign," is a label much like "U.S. Mail." Unlike the response "U.S. Mail," however, Alison's response gives important insights into both perception and cognition. From information available in the optic array, Alison rapidly made a meaningful association with other information which she knew about her world. That one abstraction (eagle) represents another abstraction (America) is seemingly an instance of high level cognitive processing. Yet, this 4-year old shows us that even those things which we consider highly abstract--like logos and print--are not controlled abstractly, but concretely in terms of information already possessed (in Alison's case, as a "picture sign").

5.1 (Continued)

Alison's, Nathan's and Jonathan's responses clearly are not "errors," but rather, reflections of sophisticated cognitive processing strategies which allow these children to make sense of their world.

It is only in the instance of Emily's "correct" response that a traditional internal processing model, such as that shown in Figure 1, seems adequate.

5.1 Figure 3. A Traditional Internal Processing Model (Neisser, 1976)



This model suggests that Emily saw U.S. Mail (Retinal Image) and began processing this image at increasing levels of sophistication, i.e., as individual graphemes which needed to be related to phonemes stored in memory (Level 1 - Processing), as combinations of graphemes which needed to be related to English orthographic spelling patterns stored in memory (Level 2 - More Processing), as words which needed to be identified in terms of one's lexical data bank stored in memory

5.1 (Continued)

(Level 3 - Still More Processing), and so on until recognition or consciousness.

Meaning in this model is something to be reached via more fundamental processing; the result, not the intent. Figure 3 is a static model: The input is static; the output appears static.

We use the term "appears" deliberately, thereby suggesting that even in instances, like Emily's, where the response appears bound and thereby explainable in terms of the graphic input alone, the "true process" shares much similarity to that used by Nathan, Alison, and Jonathan.

Data presented in this paper seriously question the assumptions underlying the internal processing model of language. Because of this model's pervasiveness within early childhood education and reading, it seems important to point out the instructional, conceptual and practical implications which this model has led to and which data in this paper challenge.

Instructionally, it is this conceptualization of print processing that has led to early language programs which stress ordered sequence of skills; from letter and sound relationships to syllabication, to blending, to words, to word patterns, to literal comprehension, to inferential comprehension, to critical comprehension, to ever "higher" forms of literary analysis.

Conceptually, it is this representation of print processing that has led to references of the process by rubrics such as "print acquisition" and "reading readiness," which in themselves presuppose

5.1 (Continued)

notions of oral language as learned, written language as taught. Emig (1976), for example, ranks language processes as primary and secondary:

> . . . with talking and listening characterized as first-order processes; reading and writing as second-order. First-order processes are acquired without formal or systematic instruction; second-order processes . . . tend to be learned initially only with the aid of formal and systematic instruction.

Practically, it is this conception of the process which undergirds almost all reading and writing programs in this country and has led theorists such as Mattingly (1972) as well as most curriculum designers to think of written language literacy as hinging on breaking an abstract linguistic code. Oral language is natural; reading and writing unnatural. Given such a conception, no wonder many, including Mattingly, are surprised:

> that a substantial number of human beings can also perform linguistic functions by hand and eye. If we had never observed actual reading and writing we would probably not believe these activities possible.

In contrast to this view, our contention is that written language literacy is a natural extension of all learning generally, and language learning specifically. Theoretically this view suggests that as active cognitive organisms, children encounter their environment identifying features of meaning which they perceive as salient. Babies who encounter a dog, to use an example from Neisser (1976) for example, perceive the dog not only in terms of visual cues, but auditory, haptic, and olfactory cues. Features of meaning related to these cues become organized in their schema of DOG. Later each of these features

5.1 (Continued)

of meaning--a doglike smell, for example--instantiates the entire DOG schema.

If the word "dog" is spoken when a dog is encountered, this label too, becomes a feature of meaning embedded within the DOG schema. Later this feature of meaning--someone uttering the word "dog," like our earlier example of a dog-like smell, instantiates the entire DOG schema. The fact that some features of meaning--say a distinct smell, or someone saying the word "dog"--are not present at each encounter does not make it less viable as a perceptual cue or as an essential feature of comprehension. Oral language, from this perspective, is seen as developmentally quite natural, much like other cognitive distinctions which we assume and expect young children to make.

What is not so apparent is that written language control develops similarly. If the word dog were written on a card and hung around the animal's neck, it is likely that in sampling the optic array the word dog may well come to be a distinctive feature of meaning embedded in the DOG schema, which later, when encountered, would instantiate all that is known of the canine family.

While most people do not hang labels on their dogs, it would not be surprising to encounter a BEWARE OF THE DOG sign in the presence of at least some dogs which are encountered. From experiences of this sort features of print become distinctive features of meaning embedded in whole world schema.

5.1 (Continued)

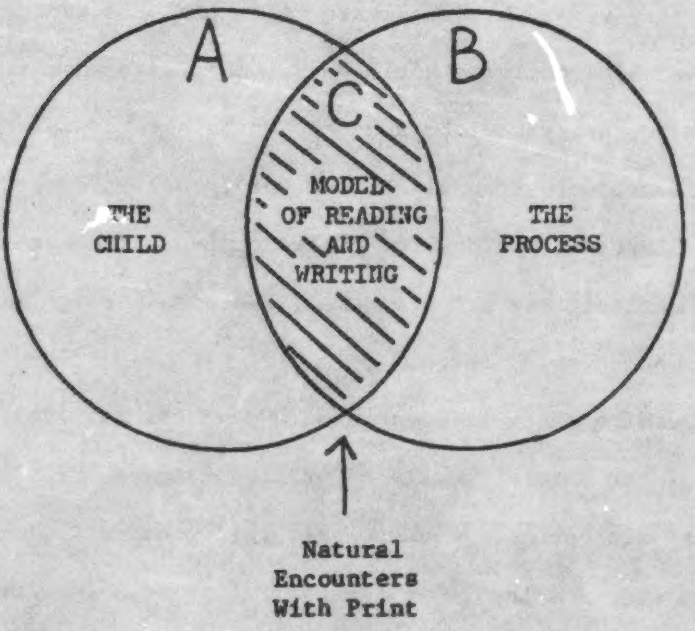
Control of much environmental print can be explained in this manner. Very young children learn to control the word stop, for example, not because some obliging adult says, "That sign says stop," each time a stop is made, but rather because the child's very presence in this language encounter provides all of the perceptual information needed for control. Later the word alone allows comprehension, not because it was accessed entirely through graphemes, but also through instantiation of relevant whole world schema.

Reading and writing are socio-psycholinguistic processes, and as such, children develop models of written language from natural, on-going encounters with print. Conceptually this premise is illustrated in Figure 4 and suggests that when the child (Circle A), bringing all that he knows about his world, including strategies for finding out, encounters language (Circle B), information is provided which permits the discovery of how the language process works. Specific language information available includes how the graphophonemic, syntactic, and semantic systems of language operate in relationship to one another, and in relationship to those things which are known about their world.

Data collected and presented in this paper suggest that preschool children have discovered much about print prior to formal language instruction. Included in the child's model of reading and writing (Circle C), as illustrated through the various language stories presented, was a functional expectation for print, an expectation for how language operates in alternate contexts, and a growing control of

5.1 (Continued)

5.1 Figure 4. A Personalized Model of Reading and Writing Prior to Formal Language Instruction



English orthography, wordness, left-to-right and top-to-bottom directionality, grapheme-phoneme correspondence and syntax. Taken as a conglomerate these data strongly suggest that written language, like oral language, is learned naturally from encountering written language in use. Further, these data suggest that formal language programs which assume that the young child knows little if anything about print and which focus initial attention on more abstract systems of language (letters and words) may (1) fail to allow children to access what they already know about language generally and written language specifically, and/or (2) convince them that the strategies which they have used to make

5.1 (Continued)

sense of their world do not apply in the instance to written language control.

Rather than engender either of these consequences, we might best begin formal language instruction by building upon those strategies which the child already uses and controls. Children develop a variety of strategies to represent and control the semantic, syntactic, and graphophonemic systems of language.

Four key strategies employed and identified in this paper include those of semantic intent, negotiability, hypothesis-test and fine-tuning language through language.

In this regard the lesson to be learned is clear. When children in our sample found themselves working in relatively under-developed communication systems--that was reading or writing--they made several decisions in common. First, their more fully representational uses of the systems were related to information of strong personal value--that was the writing of their name, or the reading of the logo of their favorite fast-food restaurant. Second, they used whatever generalized features they had factored out of these systems--that was letters, linear organization, phoneme-grapheme correspondence, the use of a wavy line--to place-hold or intuit the message. Third, they pressed to continue communicating beyond their competence with the systems they maintained their focus on the sharing of meaning while intuitively and unselfconsciously lapsing into alternate communication systems.

5.1 (Continued)

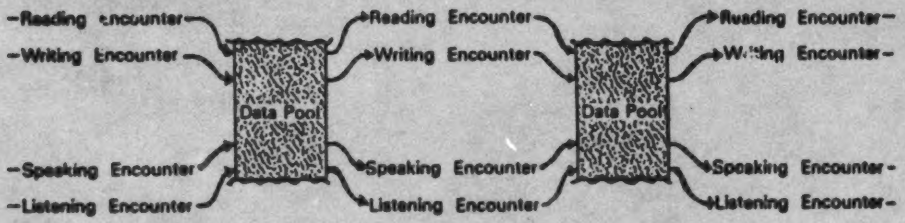
In similar regard we must come to understand that what the child knows about one expression of language can support growth and development in another expression of language. This conceptualization presupposes a parallel growth and development among the expressions of language. What the child learns about language from having a book read, for example, becomes available linguistic data for output in another expression of language, like writing in the instance of Alison. What the child knows about how oral language operates becomes available data for the discovery and testing of how written language operates. Each encounter with language develops expectancies for what subsequent encounters might mean as well as expectancies for the forms in which they may be cast. The process is cyclic. What is learned from one encounter becomes the anticipatory data available for subsequent encounters. It is through their experience as writers that the young language users in our sample fine-tuned their reading strategies.

Figure 5 suggests that each of us can be considered to possess a personal pool of language data fed by all of the language phenomena perceived out of our world; a pool which constitutes the sum of our current definition of language; a pool from which we draw data for processing each time that we become involved as language users. The pool of language data is constituted of a set of relations concerning how meaning is shared through language. The data for the pool enters as part of listening, speaking, reading or writing experiences and likewise exists as any one of the expressions of language. The lines

5.1 (Continued)

which we as literate individuals draw, between the varying expression of language and the alternate communication systems are arbitrary. Focusing a young learner's attention upon them can only constitute a distraction in learning to mean (Burke, 1978).

5.1 Figure 5. Linguistic Data Pool


Reading Encounter
Writing Encounter
Speaking Encounter
Listening Encounter
Data Pool
Reading Encounter
Writing Encounter
Speaking Encounter
Listening Encounter
Data Pool
Reading Encounter
Writing Encounter
Speaking Encounter
Listening Encounter

Instructionally these data suggest that as teachers we need to be concerned not only with what children do once they encounter print, but further with what anticipations they hold for language generally as well as what decisions they make about reading and writing on the way to the process. In this regard, our role as teachers is best thought of as assisting children discover the predictability of written language in alternate real world, whole-language, contexts. Written language activities provided for children should be meaningful, open-ended, situationally valid and rich enough contextually to allow children access to their natural written language learning strategies of semantic

5.1 (Continued)

intent, negotiability, hypothesis-test, and fine-tuning language through language.

Written language growth and development is a socio-psycholinguistic process. Seeing this relationship, we believe, not only opens the vistas of what is instructionally possible, but provides much needed new conceptualizations for the exploration of written language literacy.

5.2 EXAMINING INSTRUCTIONAL ASSUMPTIONS: THE CHILD AS INFORMANT

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Indiana University

*Article prepared for Theory Into Practice, Summer 1980 Issue.

Alison, age 6, could hardly wait for first grade to start. Her mother explained her anxious anticipation tongue-in-cheek, saying, "She's caught it from me! She's no more enthusiastic than I am that school is going to start!"

A letter from her new teacher welcoming her to her new classroom made her impatience even more obvious.

Finally the day came when Alison and her mother could privately go to find her room, meet the teacher, and explore the school. Alison was in ecstasy! She got to register her name and birthdate on the class birthday cake, explore the reading center, tell about her summer, find out what supplies to buy, and clarify both for herself and her teacher what bus she would be riding. Alison was now more than ready.

So was her mother. This teacher was a marvel! She obviously loved children and was insuring that they would have a good year. Alison had already made her mark on "her new classroom."

That was some time ago. School is now in full swing. Alison is still enthusiastic. She loves school--the books, the teacher--and willingly shares her observations and experiences:

"Recess is 'the pits!'"

"The boys chased me today and I fell. Do you know my friend was being so 'unconcentrative' that she didn't even come to help?"

5.2 (Continued)

She also brings home her reading and writing worksheets, her art work, and other items produced or completed each day in school.

We would like to share these with you as we think that they are typical of many of the language activities found in first grades. They may even be better activities than those found in many classrooms, though we wish to argue that they are not good enough; that they reflect unfounded assumptions about written language growth and development, and that they debilitate rather than facilitate the process of language literacy.

IDENTIFYING THE TEACHER'S ASSUMPTIONS

One of the first activities which Alison completed is that shown in Figure 1.

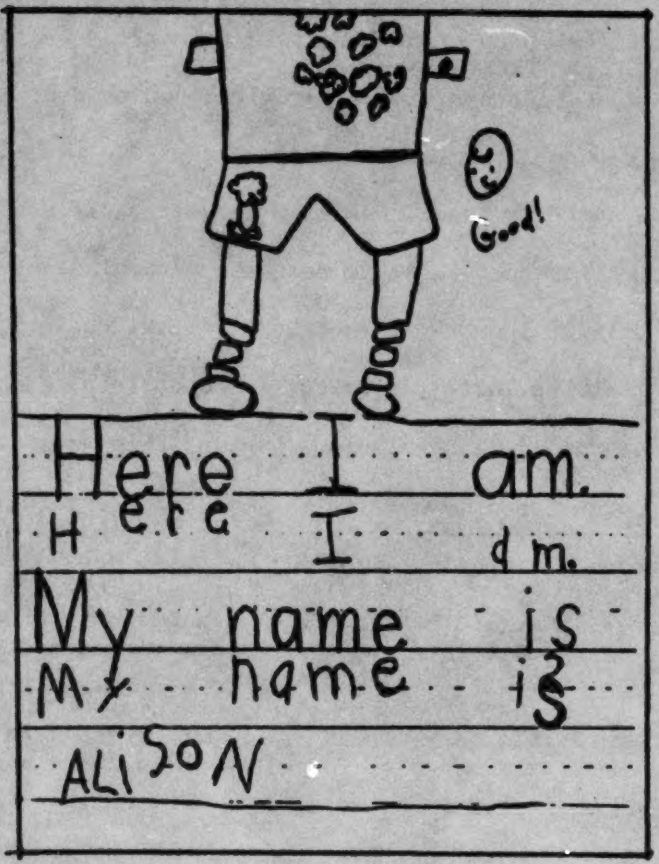
When questioned at home about why she had elected to draw the bottom half of her body, Alison responded, "It's okay, teacher said so. Someone asked and teacher said we didn't have to draw our 'whole self' if we didn't want to."

The teacher, in all likelihood, responded in this manner assuming some children wanted to draw their heads rather than their complete figure. It is interesting to note that Alison, given the option, elected to draw her bottom half and leave her top half unrepresented; extending, as it were, off the page.

On first blush, we might think, "A creative response to a good instructional activity." But is it? After all, this was an activity

5.2 (Continued)

5.2 Figure 1. Underwriting (Alison, Age 6.4)



Here I am.
Here I am.
My name is
My name is
ALISON

designed to help children learn to control the reading/writing process. Did it do for language, what it did for art? In order to answer this question it becomes necessary to examine the activity more closely. We need to identify what teacher-held assumptions underlay the creation and selection of this activity.

5.2 (Continued)

This is readily done by identifying the set of written language principles relative to learning which undergird this activity as opposed to other activities which might have been selected. We can easily think of both more open and more closed activities which were available options to the teacher. For example, the teacher did not elect to give the children a sheet of paper, ask them to draw a picture of themselves and then write or pretend to write an autobiographical story to share (a more open activity), nor did the teacher focus the children's attention upon an isolated letter or letter-sound correspondence pattern (a more closed activity). An analysis, then, of this activity and of the teacher's responses to it, suggests the following assumptions relative to written language learning:

Assumption 1: One of the first tasks in learning to read and write is to be able to discriminate visually the letters of the alphabet.

This is best taught by activities such as underwriting which force the child to attend to the distinctive features of each letter.

Assumption 2: Language activities designed for children should be manageable to insure completion and hence success.

One way to accomplish this is to use simple whole texts which contain a limited number of basic vocabulary items (Here I am. My name is . . .).

Assumption 3: Errors should be marked to give corrective feedback and stop bad habits from forming. (See the teacher's correction of 's' in Figure 1.)

Assumption 4: Initial language activities should be personally meaningful to the child.

This is best done by focusing on topics of interest to the child. (In this activity, the topic self.)

5.2 (Continued)

Assumption 5: Children do not need as much support in art as they do in writing.

The incorporation of art allows for self-expression and creativity.

The question now becomes, "In order to make these assumptions, what does one have to believe?"

The more obvious belief underlying Assumption 1 is that children need to be able to note differences between the various letters of the alphabet in order to read and write. Less obvious perhaps is the implicit belief that first graders do not already possess this ability to discriminate the letters of the alphabet, i.e., that visual discrimination of letters must be formally taught.

Each of these beliefs merits investigation. They may be as much folklore as developmental givens. The rampant popularity of a belief is never criterion for acceptability, but rather for testing.

A rather extensive listing of further beliefs which we have identified as inherent in this single instructional activity is given below.

- Access to the reading/writing process hinges on mastery of the distinctive features of print (see Assumption 1).
- The word is the key unit in language (see Assumption 2).
- Words selected for initial instruction must be chosen on the basis of frequency of usage (see Assumption 2).
- Errors must be pointed out by a guiding adult as children do not have information which they can use for self-correction (see Assumption 3).

5.2 (Continued)

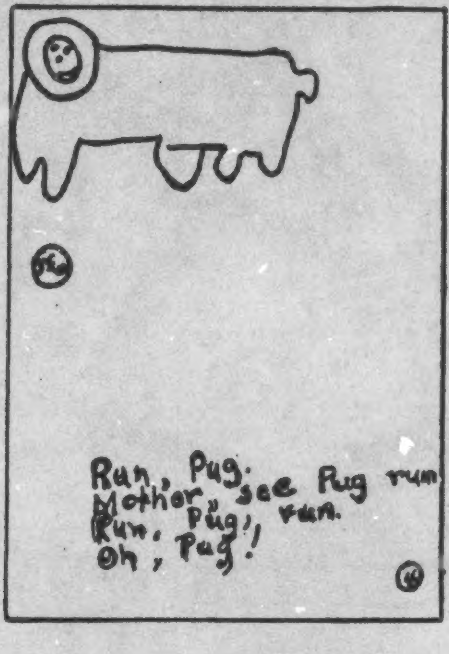
- The goal of early language learning is an error-free performance on basics as without this children will never be able to access the process (see Assumption 3).
- Activities which make personal sense support the child's access to basic literacy processes (see Assumption 4).
- This means, in as far as language learning is concerned, that topics should be chosen carefully so that children find them personally meaningful but the actual language introduced must be carefully selected and controlled by the teacher (see Assumptions 2 and 4).
- Art is an easy activity for the child (natural); reading and writing are hard activities (unnatural) (see Assumption 5).
- Art is learned; reading and writing must be taught (see Assumption 5).
- Creativity must wait upon control. Because children have already learned the basic forms of art, i.e., they have control of the basic conventions, creativity can be expected. Once children control the conventions of written language, they can and will become creative written language users as well (see Assumption 5).

Some may argue that this analysis is a highly speculative process, and infers much from a single instructional activity. To this, we would have to agree. These same persons would, however, feel more comfortable, as indeed we would, if the identified language learning principles reoccurred in subsequent activities. To show that this is indeed the case, three additional activities completed during the first week of school are illustrated.

The activity illustrated in Figure 2 is closely tied to that already discussed in Figure 1. In this instance, children were given ditto master copies of story parts of which the page shown is one. The children were asked to arrange the pages in order, paste them to the

5.2 (Continued)

5.2 Figure 2. Overwriting (Alison, Age 6.4)

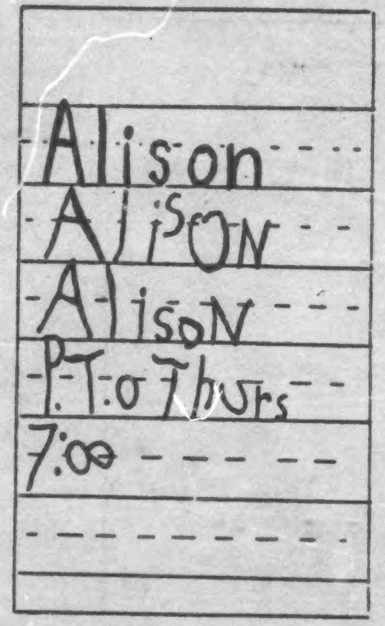

Run, Pug.
Mother, see Pug run
Run, Pug, run.
Oh, Pug!

blank pages of a stapled book, draw a picture to fit the text, and overwrite the script on each page. Though this assignment involves more procedures, what has been said relative to beliefs inherent in the first activity, holds for this activity too. The significant creative decisions related to the written language--the writing of the story--have been made by the teacher. The student is left to simply recreate the decreed text order and to copy the print. Only the art is left open to creative efforts of the student.

The activity which generated the product illustrated in Figure 3 initially appears somewhat different, but closer examination indicates

5.2 (Continued)

5.2 Figure 3. Copying (Alison, Age 6.4)



Alison
AliSON
AlisoN
P.T.o Thurs
7:00

that it too shares the beliefs reflected in the first two assignments. This assignment is a Parent-Teacher Notice which the children were asked to copy off the blackboard and take home as a reminder of an upcoming meeting. In this instance, the teacher gave each child a sheet of lined paper with their name on it. Children were asked to underwrite their name twice, and then copy the message that had been written on the blackboard.

An analysis of the beliefs which guided this activity suggests that all of the original beliefs hold, and that a further clarification has been obtained. Presumably the teacher is concerned with how Alison

5.2 (Continued)

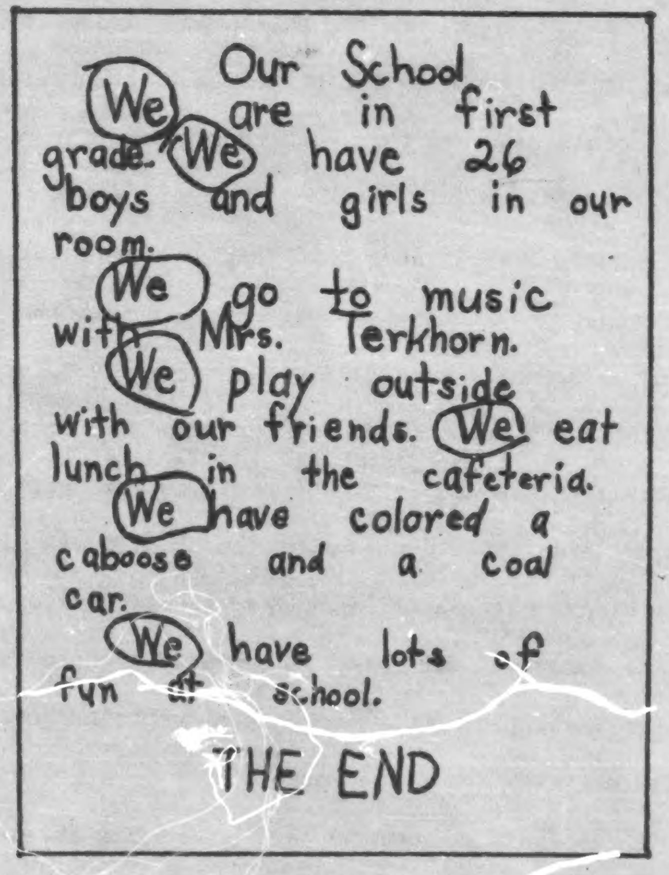
spatially controls the writing of her name and feels that practice is needed. Often this concern for the child's inability to stay within the lines is predicated on the belief that handwriting signals muscle and eye coordination and that such coordination is prerequisite to learning to read and write.

Figure 4 illustrates this teacher's application of the language experience approach to teaching reading. Rather than transcribe what the children actually said, Alison's teacher transformed each new suggestion into a common pattern for the purpose of teaching the word 'we' and controlling the complexity of the syntactic patterns used. After the teacher had composed this text, each child was given a ditto copy of their class-contributed "language experience story" and asked to circle the word "we" each time it appeared. While the instructional activity has changed, the underlying assumptions governing the activity remain intact from the first three lessons.

An analysis such as we have been doing is intended to indicate that what Alison's teacher believes about the reading and writing process strongly affects both her choice of instructional activities and her handling of such activities. Her behavior is orderly, consistent and predictable. This is so in spite of the fact that she maintains that she is eclectic and applies "a variety of approaches to the teaching of reading." Despite supposed surface structure variety in activities, her invariant assumptions continue to show.

5.2 (Continued)

5.2 Figure 4. Class-Contributed "Language Experience Story" (Alison, Age 6.2)



Our School
We are in first
grade. We have 26
boys and girls in our
room.
We go to music
with Mrs. Terkhorn.
We play outside
with our friends. We eat
lunch in the cafeteria.
We have colored a
caboose and a coal
car.
We have lots of
fun at school.

THE END

From data such as this, we have come to believe that looking at teacher behavior in terms of the beliefs held and assumptions made is a more cogent and powerful one than looking at behavior in terms of the supposed approach being used (Harste and Burke, 1977). This teacher presumably changes approaches, but because she has not changed beliefs, her classroom practice is unaffected (as is, in all likelihood, the

5.2 (Continued)

outcome of her instruction, but that's another equally important and complex issue which we will not develop in this paper).

These data support the position that the teaching of reading and writing is theoretically based. That each of us as teachers has a theory of how to teach reading and writing in our heads which strongly affects our perception and behavior. We define theory simply as a set of interrelated beliefs and assumptions through which perception and behavior are organized. What this means practically is that in order to change behavior we must change beliefs. To that end we now turn to an examination of language encounters which Alison has had prior to and outside her school related experiences.

IDENTIFYING THE LANGUAGE LEARNER'S ASSUMPTIONS

Reading. Alison, we wish to argue, has been a user of written language for a long time now. One of the earliest instances of Alison's use of written language occurred when she was 3 years old. At the time, Alison and her family were on the way to the zoo. As they approached the beltway which would take them to the zoo, Alison's father, pointing to an overhead sign signaling 'West 465' and asked, "Alison, what do you think that says?"

Alison responded, "It says . . . uh . . . 'Daddy, turn right here to go to the zoo.'"

While some might argue this isn't reading, we wish to disagree. Alison has made a decision which puts her in the semantic ball park.

5.2 (Continued)

She assumes that the print out there relates to the activity in which she and her family are engaged. And she's right in all but the pickiest sense. Alison's response demonstrates her expectation that written language be meaningful. We do not know how or when children come to this important conclusion. All we know is that children as young as 3 have already made it, and that somehow readers who end up in remedial classes have lost or lost faith in it.

We believe it is through the expectation that written language make sense, that control is gained. Once the sense-making intent of written language has been perceived, ideation and hypothecation become the process forces of control. To further illustrate this point we can share another one of Alison's early encounters with print. This encounter occurred on a "dessert trip" to Baskin-Robbin's. She was 4 years old at the time.

After eating her ice cream cone, Alison looked around the room attempting to find a trash can in which to deposit her soiled napkin. After exploring logical locations, she found it, studied the wooden flap engraved with the word "PUSH," performed the required action, and deposited her napkin.

Alison's mother, who had been observing her problem-solving behaviors now asked, "Alison, what does that say on the trash can?"

"Push," came the response.

"How do you know?" came her mother's next question.

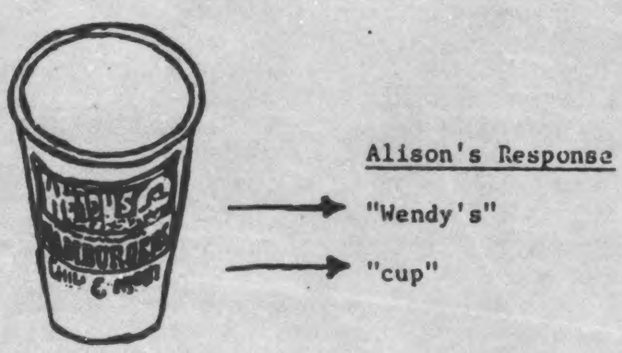
5.2 (Continued)

To which Alison took her index finger and ran it over the 'P', the 'U', the 'S', and the 'H' in turn, responded, "because it's got all the right letters!"

It was from knowing what written language does, that Alison had grown in her control of the form. From earlier cognitive decisions such as that illustrated in the trip to the zoo, which put her in the semantic ball park, she could and did test language hypotheses which put her--to carry the metaphor another step--not only on base, but gave her the meta-linguistic control to speak about the game itself.

The importance of this process of on-going hypothesis testing is best illustrated by yet another language story. Alison was 4 years 1 month at the time. In this instance she was shown a Wendy's cup, like the one illustrated in Figure 5, and asked, "What do you think this says?"

5.2 Figure 5. Wendy's Cup (Alison, Age 4.1)



5.2 (Continued)

Alison responded, running her finger under the word 'Wendy's', "Wendy's" and running her finger under the word 'Hamburgers', "Cup." Alison paused a moment after producing her response, as if in reflection, and responded, "That's a long word with a short sound!"

In this instance, the hypothesis which Alison has formulated relative to graphic-sound correspondence is an incorrect one. Yet, her very mention of it signals us to the fact that she has also formulated the correct alternative and was attempting to orchestrate this decision with the sense-making intent she knew existed.

Need we help here? Not in a traditional corrective sense. All we need to ensure is that she have continuing encounters with the process, for each encounter will allow her to test out the validity of her current hypotheses and to reconstruct a new set at a level far above our assumptive imaginations.

Alison was reading before she went to first grade. Her teacher, through the use standardized tests, has placed her at the preprimer level. At home she reads such texts as It's The Easter Beagle, Charlie Brown (Schulz, 1976)--she's likely not to encounter equivalent print settings in school until fourth grade.

Why the discrepancy? It's those assumptions again. The tests Alison has taken in school strip language of its context, forcing her to deal with letters and words not only outside a supportive linguistic environment, but also outside a supportive context of situation. Without

5.2 (Continued)

the latter Alison has neither a point of anticipation, nor a point of contextualization.

Written language learning is a social event of some complexity and written language use reflects the orchestration of this complex social event. Both the complexity and the orchestration support the development of user control. Knowing Alison as the reader she is would leave her production of backward s's in writing (as illustrated in Figure 1) a puzzlement unless one gives up the assumption that control of form is prerequisite to the language process. It is because Alison is, and has been, a reader and writer that she has a growing control of its form, not vice versa.

Writing. Alison is, and has been, as impressive a writer as she is a reader. Her explorations of written language began long before what was produced became representational in any adult sense. What Alison reaffirmed in her movement into writing is that children must encounter the language process in its complexity in order to learn control. As with reading, it was Alison's early access to what written language does that allowed her control.

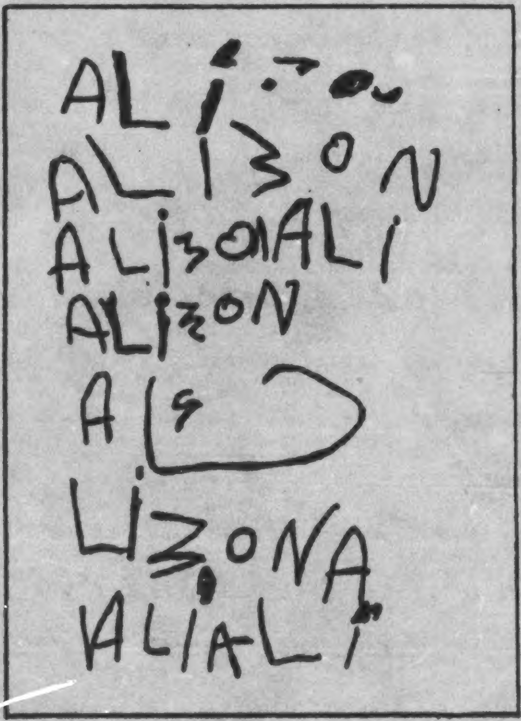
At 4 years, 3 months, Alison encountered a wordless book and made up an appropriate story. The next evening in wanting to reread the book she asked, "What was the story I read last night?"

"Well, I'm sure I don't know. If you want to remember your stories, you need to write them down. Then you can reread them whenever you want to."

5.2 (Continued)

Alison's story in Figure 6 about Daddy coming home and taking the family to McDonald's was placeheld using the letters of her name simply reshuffled in order. For months, whenever she encountered this book, she would get her paper out and faithfully read this text with minor variation:

5.2 Figure 6. Story to Wordless Book (Alison, Age 4.3)


ALi
ALI3ON
ALI3ONALI
ALI3ON
AL9
LI3ONA
VALIALI

5.2 (Continued)

> One day Daddy came home and
> he said, "Hi Family, I'm home,"
> and he's gonna take us to
> McDonald's. I'm gonna have a
> Fun Meal.

This sample illustrates Alison's public announcement of her discovery of the finite symbol system in written language; namely, one continuously re-orchestrates the same set of letters to produce an infinite set of words. Alison, as was always the case, demonstrated this growth using print of high personal worth--in this instance, her name.

As in reading, adult recognition of the process often seems to hinge on how representational or conventional the product is. This is clearly unfortunate, for it leads to the dismissal of early efforts as not worthy of attention.

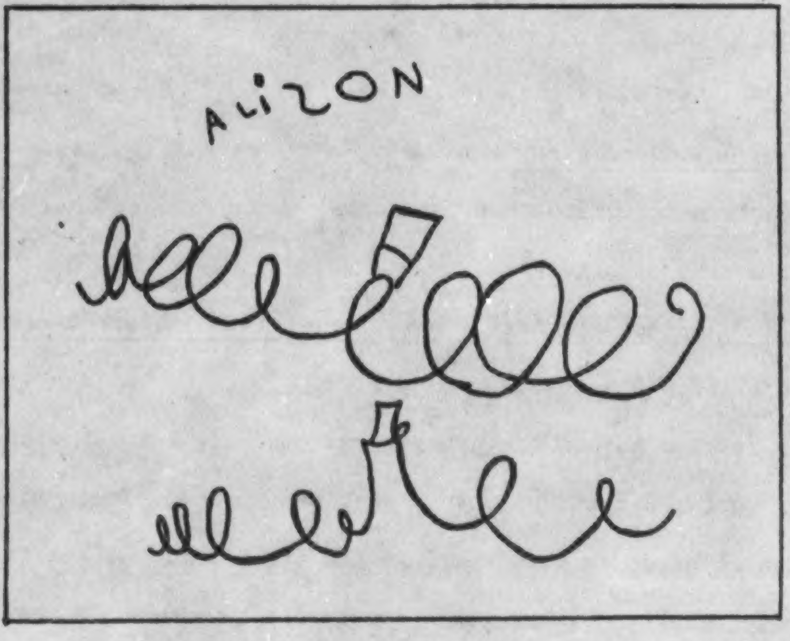
Alison is clearly a writer in this instance, orchestrating aspects of this particular social event much as would any writer. She has grasped much: the meaning relationship between picture, text and her world; directionality (both top-down and left-to-right), the function of print in this setting; the organizational scaffolding of a story; the use of structure components to placehold meaning. Each of these decisions is a signal of developing written language literacy. The fact that her writing is not yet representational (the symbols she uses to placehold McDonald's or Daddy do not look identifiable as such to our literate eye) is not nearly as significant as are these other factors.

5.2 (Continued)

Alison's orchestration of these multiple decisions is clear evidence of her sophistication. In light of all that she has managed to do, why should the questions most frequently generated about her accomplishments be, "Did she spell correctly?" and "Did she make her letters right?"

At 4 years, 8 months, Alison placeheld all written messages using a cursive script such as that illustrated in Figure 7. While a

5.2 Figure 7. Cursive Story Script (Alison, Age 4.8)



5.2 (Continued)

first blush look at Alison's product at this juncture might indicate that she knew little about writing, such a conclusion would turn out to be assumptive and false.

What this product represents is simply Alison's testing of alternate available hypotheses. Although we cannot know for sure what is being tested, we can feel fairly comfortable in light of her earlier behavior in saying that she has tentatively set aside some of what she already knows (her knowledge of letterness and the finite symbol system of English) to test other aspects of the process. Alison has not had a setback. Current models suggest linear growth with more and more aspects brought under control in an incremental fashion. Data such as this clearly challenge such extant notions of development.

If one views each instance of written language use as the orchestration of a complex social event, then what the initiate written language user is faced with is a problem of some magnitude. As varied elements in this event are perceived, new hypotheses are generated and tested. The hypotheses are concerned with pragmatics (what are the rules of language use relative to a particular context), semantics (how can I say what I mean), syntax (how do I get the flow of my message captured on paper), graphics (how do I represent what I wish to say), and the orchestration of these systems (how do I draw on all these systems simultaneously). Within each of these areas there is, of course, a range of hypotheses which need formulation and fit. Additional hypotheses arise as more and more elements are orchestrated.

5.2 (Continued)

What looks like regression, given the assumptions underlying one theory, signals growth from another theoretical perspective.

Growth while constant--and we believe this to be the mode for all of us as written language users--looks sporadic because of the primitives which undergird our assumptive yardsticks. Current yardsticks divert attention away from growth toward "developmental stages" which attempt to calculate growth by marking surface level features of conventional form. Such a focus draws our attentions away from the universals of written language literacy which operate across language users at all ages and simply express themselves in a variety of alternate forms. Our thinking becomes limited to a step-wise regression to perfection.

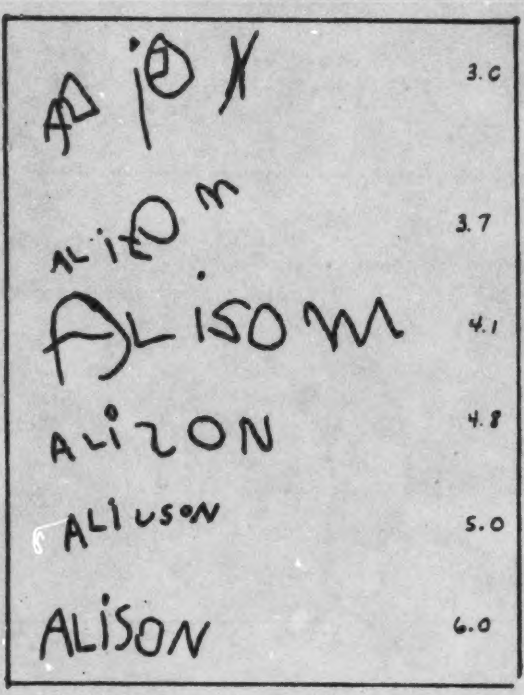
As an instance, let's take spelling, often measured as a simple yes-no decision. Alison has used the conventional spelling of her name since she was three years old, as is illustrated in Figure 8. Yet her most interesting signature is not her first or last, but one she experimented with during a 2 week period shortly after she turned 5 years of age. At this point, Alison wrote her name adding a 'u' in the middle. When asked shy she added the 'u', she replied, "Because I wanted to." After several weeks of experimenting with this signature, she abandoned it in favor of the spelling her parents had elected at birth.

Isn't it fascinating? Everything Alison had discovered about print compelled her to say that there ought to be a 'u' in her name. And

5.2 (Continued)

there well could be. It was one of the options her parents could have taken when they selected the original spelling of her name.

5.2 Figure 8. Signatures (Alison)



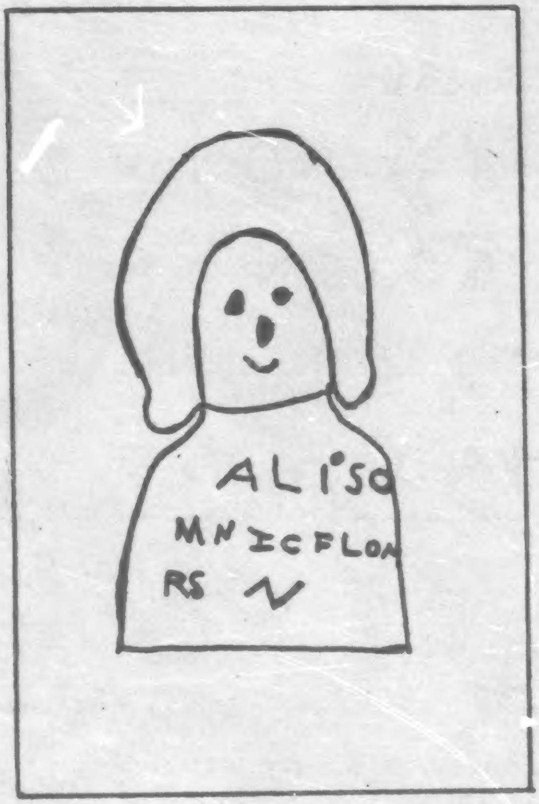
Alison feels very comfortable with what she's discovered about how print operates. Like all of us, she's most satisfied and most interested in her latest discovery and tries it on for fit. Similar trends will be seen in the writing of all of us--a favorite word, a favorite syntactic pattern, a favorite organizational style. The issue is not so much what is being tested or how much conventional congruency

5.2 (Continued)

is achieved, but that the universality of growth, and fit, and continued growth is expressed.

At five and one-half Alison made a finger puppet out of paper and was asked to make a smiling face and to write about something that made her happy. She produced the product illustrated in Figure 9.

5.2 Figure 9. Finger Puppet (Alison, Age 5.6)



5.2 (Continued)

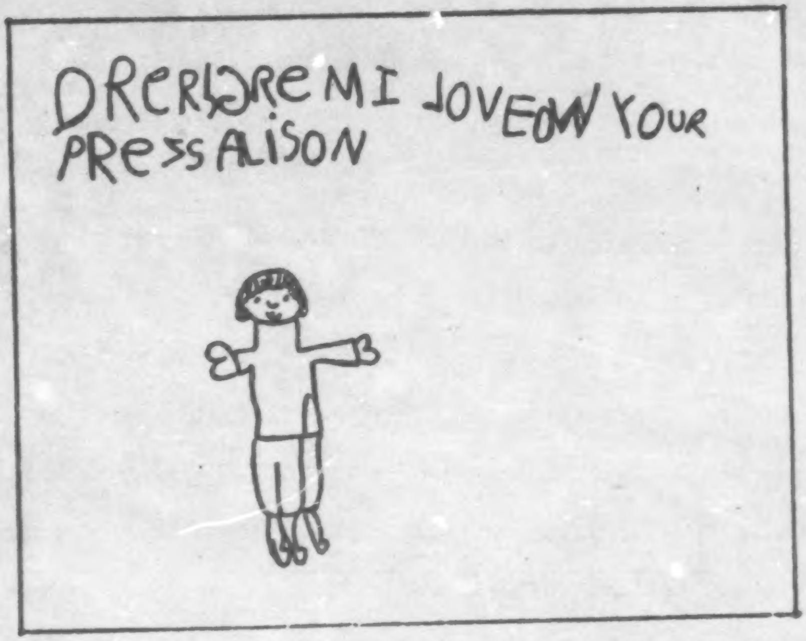
Without apparent warning, Alison moved so naturally from the writing illustrated in Figure 7 to that represented in Figure 9 that her behavior quite shocked us. She has been writing in this latter fashion ever since.

Alison's What Makes Me Happy (Mn I C FLOMRS--When I see flowers) is an impressive display of rule-governed and orchestrated behavior. The message is the product of an integrated processing of pragmatics (used appropriate language in this setting), semantics (said something which makes personal sense), syntax (managed to capture the flow of her thought on paper using the standard conventional form of wordness), and graphics (abstracted out salient letter-sound relationships which undergird written language and placeheld these relationships with letter forms). Given such a magnificent breakthrough, we find it quite frustrating that the only comment made by one professional with whom we shared this piece was that her "W's were upside down."

On her 6th birthday, Alison wrote her grandmother a letter thanking her for the present which she had received. Once again her knowledge of written language is extensive showing a complex mapping of letter-sound relationships, syntax, and meaning. When her writing in this instance is compared with that done on the puppet, it becomes clear Alison also has some awareness of the function of written language in alternate settings. That is, her letter sounds like a letter while the message on her puppet was a response to the implied lead, "What makes me happy . . ." Note also Alison's conventional spellings

5.2 (Continued)

5.2 Figure 10. Letter to Grandmother (Alison, Age 6.0)



Text Translation

"Dear Grandma, I loved your present. Alison."

of loved and your, indicating that she is not only using a phonetic mapping in her spelling, but a visual memory of what these words look like. Alison orchestrates these elements so smoothly that they go easily undetected as the magnificent achievements which they are. The fact that such phenomena are sorted out so readily by children at such an early age leads us and others to conclude that, "Writing is Natural" (K. Goodman and Y. Goodman, 1976).

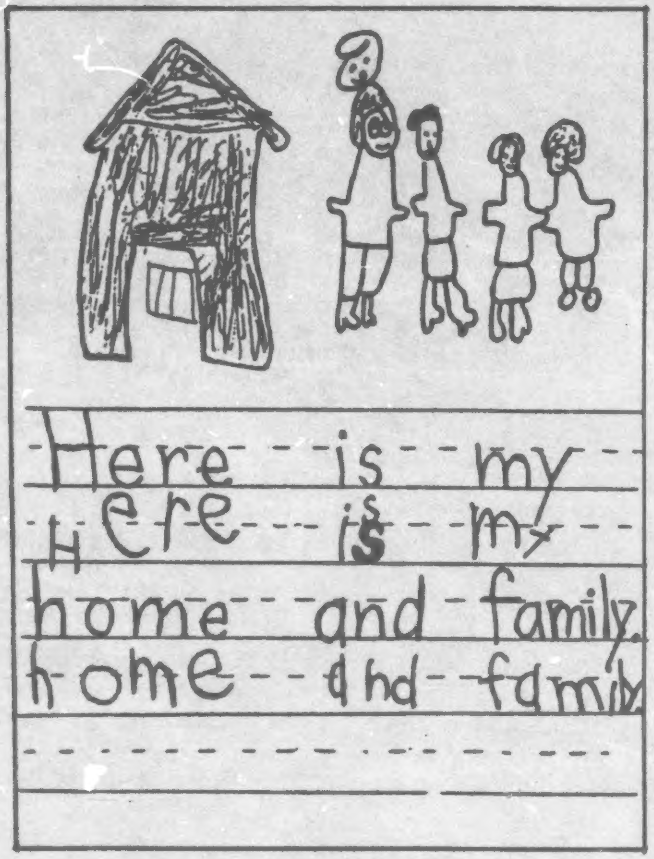
Alison's behavior here is a vivid display of the interrelatedness of reading and writing. It is through having encountered the words loved and your in reading that Alison fine-tunes her writing strategies. Alison simultaneously orchestrated spelling the way it

5.2 (Continued)

sounds, spelling the way it looks, and spelling the way it means. All of the growth illustrated in the examples above occurred prior to Alison's entrance into first grade -- growth untapped in the instructional activities which Alison's teacher provided for her.

On the occasion of Alison's return from school with the written product shown in Figure 11, she was given a piece of paper and asked to

5.2 Figure 11. Underwriting (Alison, Age 6.4)



5.2 (Continued)

to write, "Here is my house and family," the very script which she had underwritten on the school worksheet.

Alison, we lamentingly report, burst into tears and said, "I can't write."

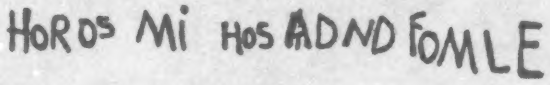
After comforting she was told, "Sure you can, you've been writing a long time now."

"But I don't know how to spell and write good," came the still tearful reply.

"Oh, yes you do. You're only in first grade. If your writing looked like ours, there would be no reason for you to be there. You know we can read anything you write."

With this Alison produced the text illustrated in Figure 12.

5.2 Figure 12. Uninterrupted Writing (Alison, Age 6.4)



HoROS Mi HOS ADND FOMLE

You, we hope, will say with us, "How sad that Alison had to have this moment of doubt."

Her assumptions did not match the instructional assumptions being addressed and hence she decides she is wrong. In this instance instruction was a debilitating rather than a facilitating experience.

5.2 (Continued)

CONCLUSION

Data collected from Alison and some 67 other 3, 4, 5, and 6 year olds (Harste, Woodward, and Burke, 1977; Woodward, in progress; Harste, Burke, and Woodward, in progress) leads us to conclude that many of the instructional assumptions currently made are faulty at best and debilitating at worst. In no instance--and our data has been collected from high, middle, and low SES, black and white, boys and girls, small town and urban inner-city--would the assumptions underlying Alison's instruction have been appropriate ones from which to operate instructionally.

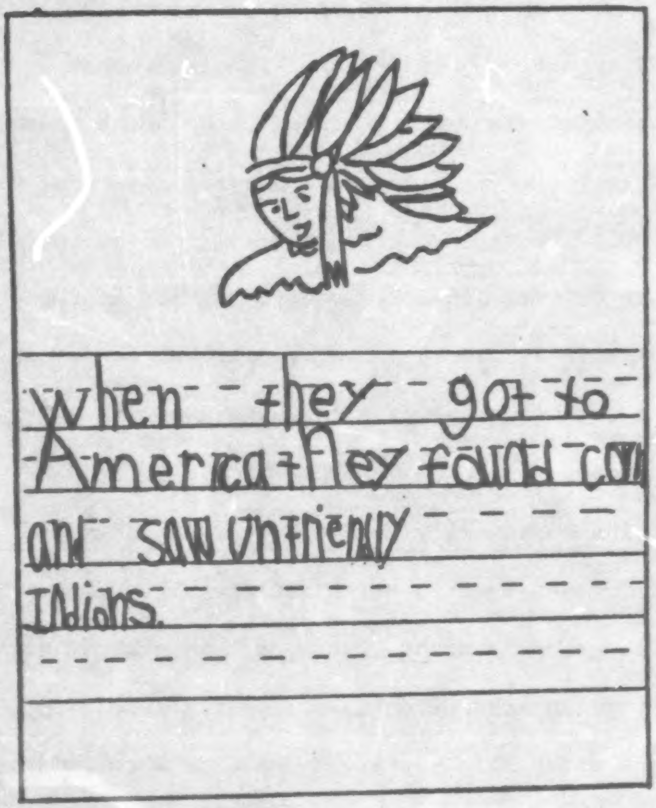
The error in the instruction provided by Alison's teacher was that the instructional assumptions were never tested through the provision of open-entry student activities which could provide alternate data and lead the teacher to challenge her own beliefs. All of the activities given to Alison by her teacher effectively force Alison to operate within the teacher's assumptive bounds; never providing her the opportunity to demonstrate what decisions she as a language user was interested in and capable of making.

What we recommend instructionally for both teacher and pupil is open-entry language activities where constraints are allowed to evolve in a risk-free language environment, where each in a sense (both teacher and pupil) can become an assumption taller than themselves. In many ways the real issue which this paper addresses is whose written language assumptions should be tested--the teacher's or the language user's.

5.2 (Continued)

Examine the following two sets of home/school activities with an eye toward the contrasting assumptions which the language user and language teacher generate. In the school assignment from the first set, Alison's teacher is re-testing those instructional assumptions which we earlier examined in this paper (see Figure 13). What set of assumptions do you find Alison focusing upon in the related project she completed at home (see Figure 14)?

5.2 Figure 13. Thanksgiving Book--School (Alison, Age 6.6)



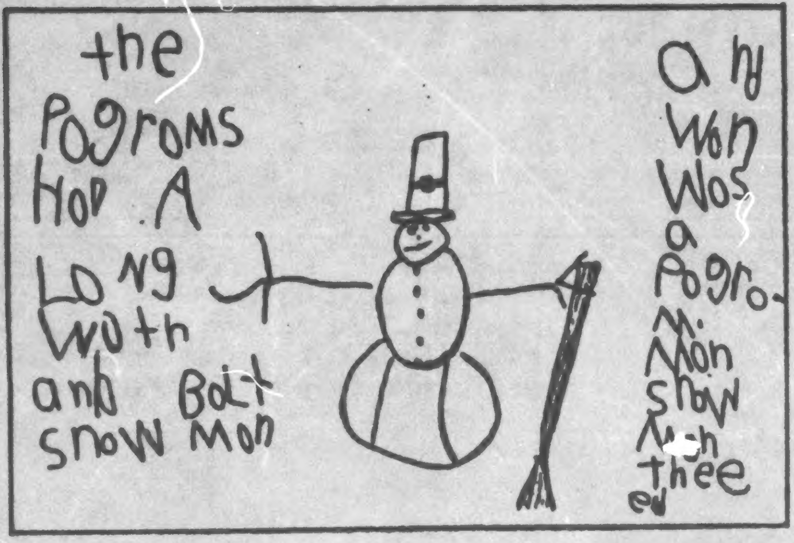
when they got to
America they found co
and saw unfriendly
Indians.

Text as Copied
from Blackboard

"When they got to American they found corn and saw unfriendly Indians."

5.2 (Continued)

5.2 Figure 14. Thanksgiving Story--Home (Alison, Age 6.6)



Text Translation

The
pilgrims
had a
long
winter
and built
snowmen

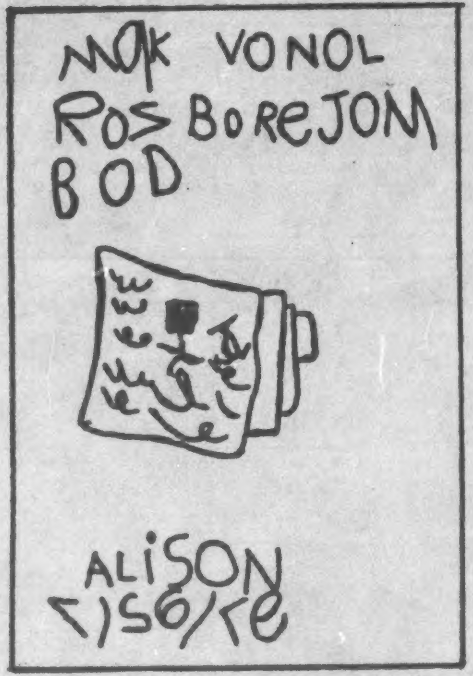
and
one
was
a
pilgrim.
man
snowman.
The end.

In the home project from the second set, Alison has developed a technique for place holding vowels in her shopping list with the letter o, a relatively new hypothesis which she is testing, but one that clearly signals her discovery of where vowels occur in written language (see Figure 15). Examine the school assignment (Figure 16) to determine the set of assumptions which the teacher is testing.

It's not that assumptions are bad. It is in fact our professional right and responsibility to both make them and have them. But, it's also our professional responsibility to self-examine them. It is only in knowing our selves and what assumptions we hold that we can begin to challenge them and grow. What is true for the language learner is true for the language teacher.

5.2 (Continued)

5.2 Figure 15. Shopping List--Home (Alison, Age 6.2)



MAK VONOL
ROS BOREJOM
BOD

ALISON
7/26/79

Text Translation

Milk Vanilla

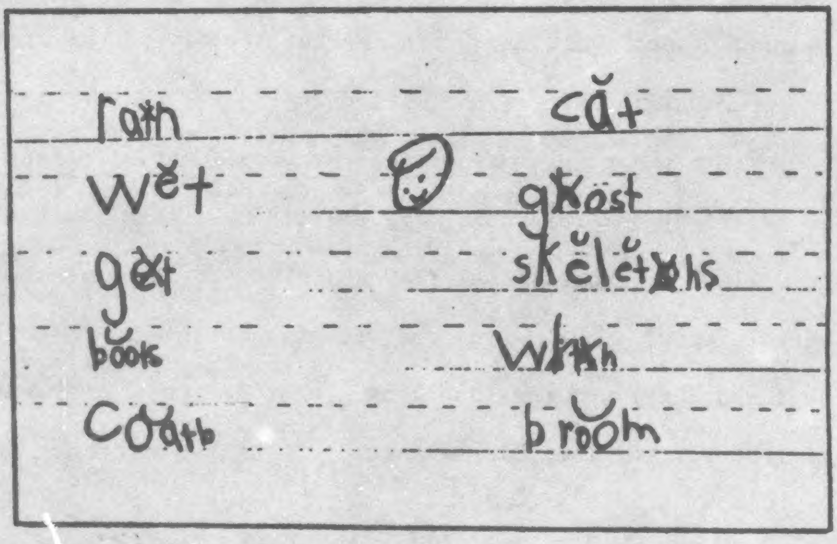
Raspberry Jam

Bread

Newspaper ("Can I draw this, rather than write?' "Sure, I don't care, just so we remember when we go shopping.")

Alison
7/26/79

5.2 Figure 16. Long, Short, and Silent Vowels--School (Alison, Age 6.6)



rain căt
wĕt ghost
gĕt skĕlĕtons
bŏoks when
coat broom

5.3 LANGUAGE AS SOCIAL EVENT

by
Jerome C. Harste
Indiana University

Presentation given at the Annual Meeting of the American Educational Research Association. Boston, April 11, 1980.

TEXT	SUPPORT MATERIALS

Language is inherently social.

When I say that I mean that the very purpose, the very function of language is communication.

Language did not develop because of the existence of one language user, but because of two.

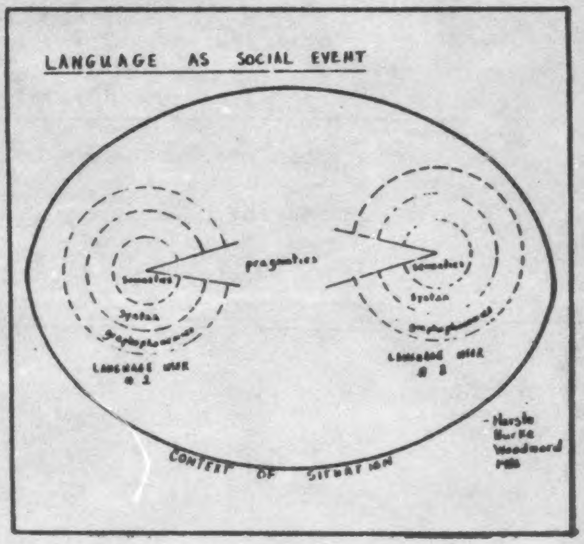
This is an extremely important point.

We often examine language as if it were internal to a single language user.

But this is misguided.

A real instance of language is not a real instance of language until it involves a second language user.

In most instances this is a real "another" language user, but in some instances--such as in supposedly talking to oneself--a "real" imposed another.


LANGUAGE AS SOCIAL EVENT
pragmatics
semantics
syntax
graphophonemics
LANGUAGE USER # 1
semantics
syntax
graphophonemics
LANGUAGE USER # 2
CONTEXT OF SITUATION
-Harste
Burke
Woodward
Mills

5.3 (Continued)

TEXT	SUPPORT MATERIALS

But it's still social.

And as such it is complex.

My principal argument today is that any instance of written language use and learning is best viewed as the orchestration of a complex social event.

This position has important implications.

Knowing that language is a complex social event sets parameters on not only the kind of language unit I can study, but the size.

To be valid, language research must not violate what we know about the language event.

What this means is that in order to examine any language phenomenon I need first of all a real instance of language, repleat in its social complexity.

I need this whole, real instance of language so that the phemomenon

5.3 (Continued)

TEXT	SUPPORT MATERIALS
I wish to study can be seen in relationship to the whole event.	
One really doesn't know what is happening in one system of language if one doesn't know what hypotheses are being tested in the other systems of language and their relationships to one another.	
To have a piece of language data which is but part of a social event is to have nothing.	
It's the case of the archeologist's nightmare.	
It's said that the nightmare of an archeologist is to find a fossil without the surrounding soil.	
Without the soil the archeologist knows nothing and can learn nothing of the origin of the fossil.	
It is archeologically worthless.	
Similarly, for the linguist to have a bit of language without	

5.3 (Continued)

TEXT	SUPPORT MATERIALS
knowledge of the context which surrounded the generation of the bit, is to have nothing. But to say this is not even enough, for if I want to say something significant with my research, I must hastily add, that the social event which I elect to study must not be too strange. Often when attention is focused to the particular phenomenon in which we are interested, the natural language process is invariably destroyed. It's like a physician studying respiration, if the subject thinks about breathing, the natural rhythm is invariently destroyed. So to have a piece of language data which represents an unnatural instance of the process is then to have nothing.	

5.3 (Continued)

TEXT	SUPPORT MATERIALS
Carolyn Burke, my brilliant colleague at Indiana, draws this analogy between language research and the language process:	
"It's like doing open heart surgery," says Burke, "if the operation we perform, stops the natural process, all is for naught."	
Practically what this means is that if we wish to study linguistic awareness, metalinguistic awareness or any other awareness, in order to do so, our most efficient paradigm is not our most direct.	
I have taken the time to develop this point because it lies at the heart of the issue we are addressing today.	
Where we begin does make a difference, and we get quite different results.	
I'd like to share with you today a portion of a taxonomy which my	

5.3 (Continued)

TEXT	SUPPORT MATERIALS

colleagues, Drs. Carolyn Burke and Virginia Woodward, have developed for the study of written language growth and development from the perspective of social event.

This taxonomy is essentially the operationalization at the paradigm which you have been viewing.

This particular social event we elected to study was one in which children encountered a wide variety of environmental print--road signs, fast food signs, toys, and household products, and were asked 3 questions:

1. What do you think this says?
2. What things do you see that help you know what this says? and
3. Tell me some of the things you know about this.

The subjects of our study were 68 3-, 4-, 5-, and 6-year old, black and white, lower and middle SES children.

5.3 (Continued)

TEXT **SUPPORT MATERIALS**

Videotape protocols were cut of each session.

Responses made by children were studied from a variety of perspectives: pragmatically, semantically, syntactically, graphically and, yes, even in terms of expressed linguistic awareness.

Pragmatically we asked if the child chose to engage in the communication contract.

What was the language user's communication decision?

We found the children selected several options:

Most maintained the contract--that is they responded to the question "What do you think this says?" with a response that was pragmatically appropriate.

Several, however, refused to participate and gave no response.

Reader Communication Desision

Q: What do you think this says?

		Total Frequency
.1	No Response	.0325
.2	Attempts to Invalidate Contract Print: No Parking This Side Reader: I can't tell you, cause I can't read.	.0050
.3	Don't Know	.0600
.4	Symbol Focus: Naming/Sounding out Print: U.S. Mail Reader: U-S-E	.0350
.5	Renegotiates Communication Contract Print: U.S. Mail Response a mailbox Print: Kroger Milk Response: Some milk goes in there.	.0950
.6	Maintains Communication Contract Print: U.S. Mail Reader 1: Mail Reader 2: U.S. Army	.7725

5.3 (Continued)

TEXT	SUPPORT MATERIALS
Others attempted to invalidate the contract saying, I don't know, I can't read.	
Many renegotiated the contract rather than answer the question what does this say, answering other questions like:	
-What is this?	
-What do you do with this?	
-How do you spell this?	
The pragmatic decision is important, however, because is is clearly inappropriate to ask certain questions of the response if the communication contract is not maintained.	
And what this study of children's responses from a pragmatic perspective has taught us is that children are pragmatically very aware.	
So much so that 78% of all responses maintain the communication contract	

5.3 (Continued)

TEXT

and all fall within the range of options adults use in response to a question:

That is, sometimes adults too:

1. Refuse to respond
2. Attempt to invalidate the contract
3. Renegotiate the communication contract (that is, answer a related but different question),

--but most often, they maintain.

Often the child's communication decision involved his or her use of language about language.

Most instances involved what Yetta Goodman has called a functional use of the culture's language labels:

1. I can't even read that.
2. I don't know that word.
3. I don't know what it is, but there's a 't' in it.

Other instances reflected the child's own attempt to develop a convention

SUPPORT MATERIALS

Language About Language

.1 Functional Use of Culture's Language Labels

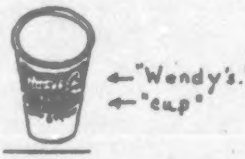
Examples:
- I can't even read that.
- I don't Know that word.
- I don't Know what it is, but there's a 't' in it.

.2 Personal Development of Functional Labels

Examples:
- That's a 't' in my word.
- B-Nobody-Nobody-y.

.3 Language System Awareness

Examples:
- That's a long word for a short sound.



- Because its a "Kro" and I added G-E-R, and I Know its Kroger.

5.3 (Continued)

TEXT	SUPPORT MATERIALS

similar to the one the culture had selected:

That a 't' in my word--referring to his name.

B - Nobody - Nobody - y - a spelling out behavior which reflects the fact that the child knows letters have names; and these letters whose names he does not know are "Nobody."

And still a third set reflecting the fact that the child had abstracted out a generalization about language and how it works.

Alison, a 4 year old, when shown a Wendy's cup and asked the question "What do you think this says," responded: "Wendy's" running her finger under Wendy's and "cup" running her finger under hamburgers.

She paused a moment as if in reflection, then turned to the researcher

5.3 (Continued)

TEXT	SUPPORT MATERIALS
and said, "That's a long word for a short sound." Her response thereby showing that she had obviously developed some general rule about word length and word sound, and that this one broke that rule. Another child, Jake, 6 years old, when asked, "What things do you see that help you know what that says," repeatedly responded, "Because it's a 'Kro' and I add G-E-R and I know it's 'Kroger'." Because it's "Dyna" and I add M-I-N-T-S and I know it's "Dynamints." His behavior across responses demonstrates his awareness of syllabication. We, of course, studied children's responses not only in terms of what they had to say about the systems of language (their	

5.3 (Continued)

TEXT	SUPPORT MATERIALS
expressed linguistic awareness), but also for demonstrated linguistic awareness.	
In this regard we studied each response and text from a -semantic perspective -syntactic perspective -graphic perspective as well as a semiotic perspective.	
We studied further each response and text in terms of response time and evolution as children's responses across our 3 questions often demonstrated an evolving orchestration and control of the event.	
While time does not permit me to share all of our results--this feat will have to await a final report--I do wish to share with you some of our observations as they bear on the topic under discussion today.	

5.3 (Continued)

TEXT	SUPPORT MATERIALS

Every child we have studied, without exception, demonstrates highly sophisticated levels of linguistic awareness.

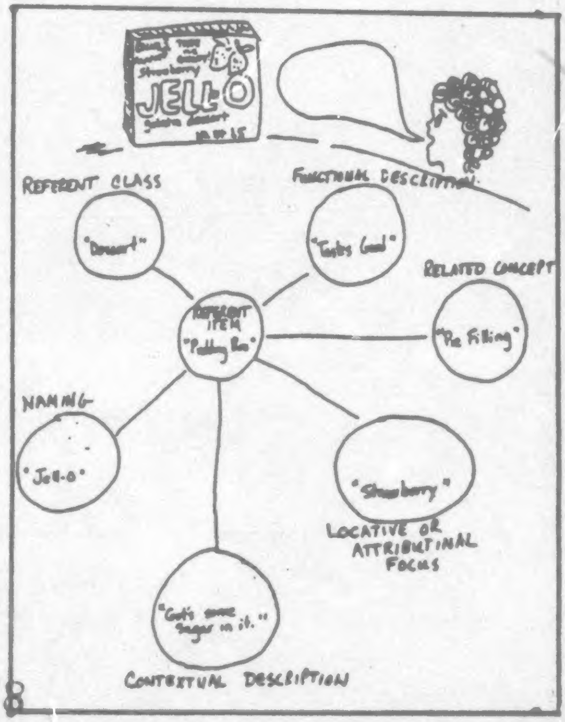
In addition to the linguistic awareness children demonstrate pragmatically, all children demonstrate that they expect print to be meaningful and have semantic intent.

Semantically the set of options which children select to talk about print coincides perfectly with the set of semantic features adults use to create environmental print setting.

To explicate this point let's examine the semantic characteristics of responses we received to one item of print: Jell-O.

Some children responded "pudding box" identifying the referent item.

Others responded "pudding" or "dessert" identifying the class to which the referent belongs.


Strawberry
JELL-O
Gelatin Dessert
REFERENT CLASS
"Dessert"
FUNCTIONAL DESCRIPTION
"Tastes Good"
RELATED CONCEPT
"Pie Filling"
REFERENT ITEM
"Pudding Box"
NAMING
"Jell-O"
"Strawberry"
LOCATIVE OR ATTRIBUTINAL FOCUS
"Got's some Sugar in it."
CONTEXTUAL DESCRIPTION

5.3 (Continued)

TEXT SUPPORT MATERIALS

Some responses identified the function served by the referent item in relationship to the language user: Eat it.

Some identified a characteristic: Strawberry.

Others identified a related concept: Pie Filling.

Some named the referent item as particular: Jell-O.

And some responses described the immediate context of the particular referent item shown: Got's some sugar in (referring to this particular box of Jell-O).

What is fascinating, of course, is to examine the semantic relationship of the print on the box to the referent item being presented.

When one examines the semantic characteristics of the print on a box of Jell-O to the referent it describes, one finds that the same

5.3 (Continued)

TEXT

semantic categories evolve as those in the children's responses.

That is, Gelatin Dessert is print identifying the referent and referent class.

Taste the Quality is a functional description of what you are to do in relationship to the referent.

Jell-O is a particular name given the referent.

Recipe is a related concept to Jell-O.

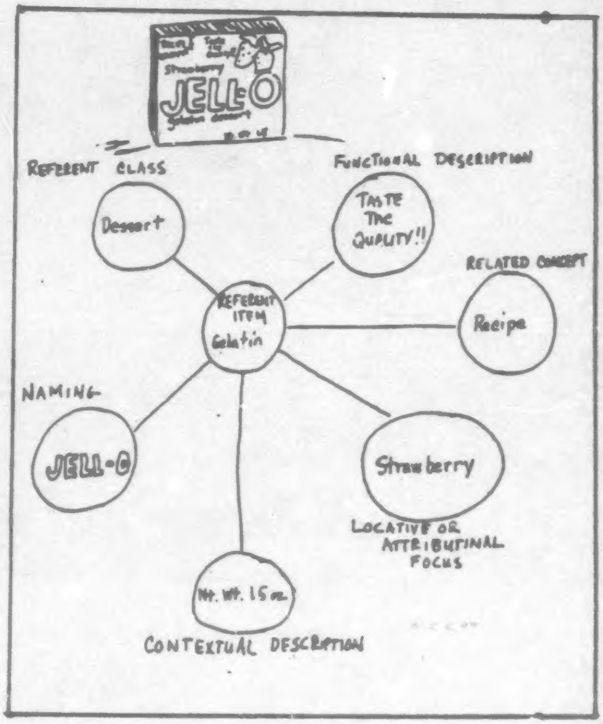
Nt. Wt. is a contextual description of this particular box of Jell-O.

Strawberry is an attribute, and so on.

If anything profound can be said of our data, it is that it provides clear evidence that the children have access to the pragmatic and semantic systems of language.

99.97% of all responses had semantic intent and are codable within the semantic feature framework I have shown.

SUPPORT MATERIALS


Strawberry
JELL-O
REFERENT CLASS
Dessert
FUNCTIONAL DESCRIPTION
TASTE THE QUALITY!!
RELATED CONCEPT
Recipe
REFERENT ITEM
Gelatin
NAMING
JELL-O
Strawberry
LOCATIVE OR ATTRIBUTINAL FOCUS
Nt. Wt. 15 oz.
CONTEXTUAL DESCRIPTION

5.3 (Continued)

TEXT	SUPPORT MATERIALS
It is the child's access to the pragmatic and semantic systems of language which leads to conventional control of the syntactic and symbolic systems of language.	
That's the reverse of our current instructional model which is built upon a belief that it's access to graphophonemic system which leads to control.	
Many would argue that linguistic awareness or a certain form of it--like morphophonological awareness--is key to access.	
Some even go so far as to say that such awareness must be expressed rather than just demonstrated.	
Our data would suggest it's just another part of the complex social event which gets orchestrated.	
I am more convinced than ever that the real issue is that many seem	

5.3 (Continued)

TEXT	SUPPORT MATERIALS
to be confused about what written language literacy is and isn't. Not having cleared this up, many confuse convention for language. Rather than explore the range of forms available to language users in an attempt to mean; one form--the culture's selected preference--becomes the yardstick and straightjacket. Clearly the advent of literacy cannot be said to begin when the child's response coincides with the culture's selected convention. If so, we have no continuum, just a yes-no switch, which tells us nothing developmentally and less than we think about convention. And this says nothing about the fact that it makes the study of literacy about as interesting as the study of a light switch.	

5.3 (Continued)

TEXT **SUPPORT MATERIALS**

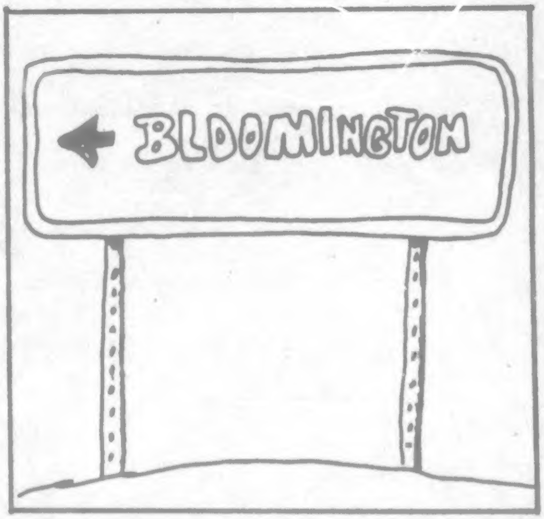
The advent of written language literacy must be defined in terms of when evidence exists that the language user has made some decision of what print means.

Access to the pragmatic and semantic systems of language is real access to literacy, whether or not the response looks graphophonemically controlled or syntactically conventional.

Language is a semiotic process and control of the pragmatic and semantic systems of language is not literacy related behaviors but literacy--real literacy.

Having made a pragmatic decision, affects the range of semantic and syntactic options available.

Several of the children in one study looked at the road sign Bloomington and said "Book."



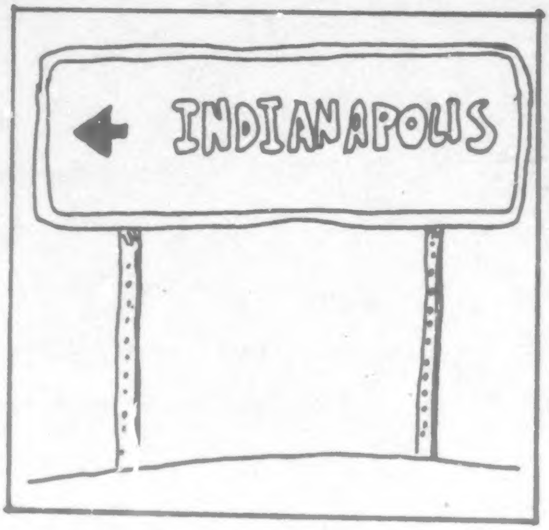
5.3 (Continued)

TEXT SUPPORT MATERIALS

Our explanation at that time was that they had gone from graphics to meaning; a pattern atypical of the way they handled other instances of print.

When we changed study sites, we decided we should give these new children the same advantage we had given children in our Bloomington Study.

We therefore showed children in Indianapolis the road sign of their city Indianapolis.



But lo and behold several of the children in this sample too said "Book."

Clearly the graphic based explanation we had developed for the Bloomington kids didn't hold here.

One child gave us a cue by mentioning Sesame Street as part of his response.

5.3 (Continued)

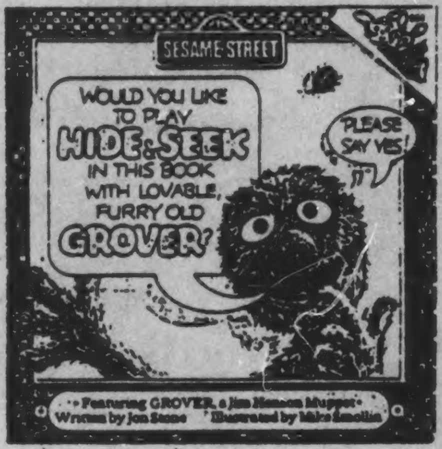
TEXT SUPPORT MATERIALS

In puzzling over this enigma one of my graduate students said, "I know," and promptly produced the explanation.

On every Sesame Street book is the Sesame Street sign.

So what looked like a graphically driven response, was really arrived at through a reinstatement of a particular context of situation and a set of semantic options appropriate to this context--the true advent of literacy, the true beginnings of an orchestrated complex social event.

Viewing written language use and learning as the orchestration of a complex social event, allows us not only to see more but permits us to appreciate these events as the magnificant achievements they are.


SESAME STREET
WOULD YOU LIKE TO PLAY HIDE & SEEK IN THIS BOOK WITH LOVABLE, FURRY OLD GROVER?
PLEASE SAY YES!
Featuring GROVER, a Jim Henson Muppet
Written by Jon Stone
Illustrated by Mike Smollin

5.3 (Continued)

TEXT	SUPPORT MATERIALS
It is only by understanding written growth and development that we can address the issue of what is optimal instructionally.	
Currently we operate as if our instructional task were to simplify the complex event.	
But this is misguided; the systems operate in consort.	
It's not the complexity of the event which causes problems; rather it's that the complexity supports control.	

5.4 ALISON: ON LANGUAGE LEARNING

By
Jerome C. Harste
Indiana University

Presentation given at the Annual Meeting of the International Reading Association, St. Louis, May 6, 1980.

TEXT **SUPPORT MATERIALS**

I want to make 3 arguments:

First, that language is best viewed as a social event of some complexity;

Second, that the preschool child is not only cognizant of this universal of language, but actively involved in its orchestration; and,

Third, that written language growth and development does not constitute an exception to the above.

3 ARGUMENTS

Language is best viewed as a social event of some complexity.

The preschool child is not only cognizant of this universal of language, but actively involved in its orchestration.

Written language growth and development does not constitute an exception.

In order to explore these arguments I have brought with me today 2 sets of data--collected at a five month interval from a single written language user.

Ladies and gentlemen, meet Alison, age 4.1.

I've titled my presentation "Alison," and subtitled it, "On Language Learning."

5.4 (Continued)

TEXT	SUPPORT MATERIALS
I've done this for 2 reasons:	
First, I do wish to address written language growth and development.	
Secondly, and of equal import, I wish to simultaneously impress upon you how much we can learn about literacy if we only take time to let the kids teach us.	
Children are great teachers if only we listen.	
And Alison is a particularly good teacher.	
She's proud, assured, at times arrogant; but frankly, quite good at her subject.	
But I'll warn you, she has already single-handedly questioned all models of written language growth and development as currently implemented in instructional programs.	
And if my colleagues, Drs. Carolyn Burke and Virginia Woodward, and I--	

5.4 (Continued)

TEXT	SUPPORT MATERIALS
or any of us here--ever do manage to propose a more adequate model of written language growth and development, it will be because we were wise enough to have selected an Alison to be one of the initial children whose literacy development it explains.	
It doesn't take much to disprove a theory--just a single exception--and Alison is good at exception.	
In language research all phenomena are significant: for the theories we develop--if they are to have power--cannot wallow in frequency or convenience, but universality.	
It is for this reason that the case study is a powerful theoretical tool.	
Because all phenomena demand explanation, theories developed from this source have more generalizability rather than less.	

5.4 (Continued)

TEXT	SUPPORT MATERIALS
Now that's the opposite of what the profession as a whole seems to think.	
But experimental studies don't have generalizability.	
Experimental studies assume that exception is handled when it is termed "error" and statistically it can be shown that it is "insignificant."	
They think by labeling it "error" and "insignificant," it is error and insignificant.	
And so they trick themselves and confuse the profession with generalizations and models which end up explaining the behavior of no one.	
I'm not trying to be a radical; I'm just trying to bring some standards back to the profession.	
A good model, now don't you agree, ought to at least be able to explain the behavior of one child before it gets implemented.	

**

5.4 (Continued)

TEXT	SUPPORT MATERIALS

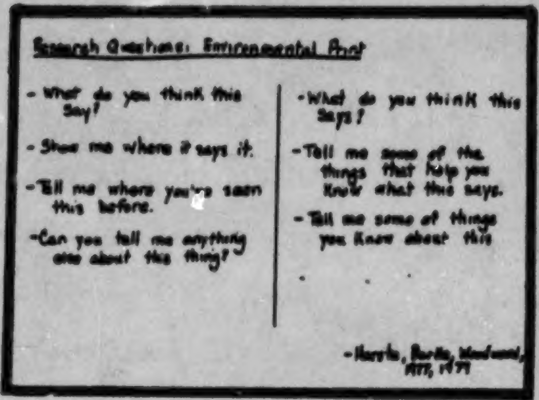
I've titled this paper, "Alison: On Language Learning," then, because that's exactly what I want to focus on--some things my colleagues and I have learned about written language growth and development from listening to and observing individual children.

Alison became an official subject when we pulled a sample of 3, 4, 5, and 6 year old children to study.

One of the tasks which we gave children to do was a task we entitled, "Environmental Print."

This task involved showing children a wide variety of environmental print--road signs, toys, and assorted household products and asking them 4 questions:

- What do you think this says?
- Show me where it says it.
- Tell me where you've seen this before.



Research Questions: Environmental Print

- What do you think this Say?
- Show me where it says it.
- Tell me where you've seen this before.
- Can you tell me anything else about this thing?

- What do you think this Says?
- Tell me some of the things that help you know what this says.
- Tell me some of things you know about this

-Harste, Burke, Woodward, NIE, 1979

5.4 (Continued)

TEXT	SUPPORT MATERIALS

- Can you tell me anything else about this thing?

We've since, in subsequent research using this task, changed our questions.

We now ask 3 questions:

- What do you think this says?
- Tell me some of the things that help you know what it says.
- Tell me some of the things you know about this.

These are much better questions.

One of the things Alison and her cohorts taught us was how to ask questions.

We found, for example, that a question like, "Can you tell me anything else about this thing?" was often answered, "No," whereas the statement, "Tell me some of the things you know about that" elicited much more.

5.4 (Continued)

TEXT	SUPPORT MATERIALS

And we came to understand something about language.

While both questions semantically seem to have the same intent, i.e., tell me what you know about this, pragmatically they operate differently.

The one, "Can you tell me . . ." focuses attention on the communication contract and the subject's capabilities relative to engaging in the contract.

In a sense it possesses the possibility of the child not having the capability.

Given the unequal social relationship between researcher and child; as well as the setting--a school where children come expecting to be taught; and the topic--reading, something the whole world has convinced them they know nothing about, it should not surprise us then that the child bows out.

5.4 (Continued)

TEXT	SUPPORT MATERIALS

In a real sense the question focuses the child's attention to the pragmatics of the setting, rather than the semantics of the questions.

It's a good instance of the relationship between pragmatic constraints and linguistic resources.

By removing perceived constraints we free linguistic resources.

The second question, "Tell me some of the things you know . . ." assumes not only that children have the information but that they understand their role obligations in this particular setting.

As such it focuses attention more on semantics than pragmatics; on the linguistic resources of meaning, rather than the pragmatic constraints of role.

**

Similarly, "Show me where it says it," as an imperative, assumes, by its

5.4 (Continued)

TEXT	SUPPORT MATERIALS
form--especially when following the question, "What do you think it says?"--that print is *the* major vehicle for the transmission of meaning.	
Now, if written language use and learning is truly a multimedia event as I have suggested (Harste, 1979), and as semioticians tell us (Eco, 1979; Halliday, 1980), many cue systems exist outside of language to support meaning.	
"Print is a necessary, but not sufficient condition for understanding print processing" (Harste, Burke, Woodward, in press).	
Unduly focusing the child's attention to *print* in a *print setting* seems questionable if our intent is to understand.	
The question, "Tell me some of the things that helped you know what that says?" is a much better	

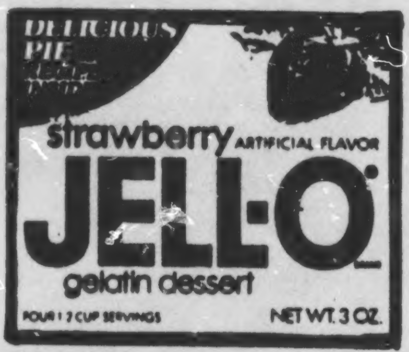
5.4 (Continued)

TEXT	SUPPORT MATERIALS
question as it allows the child to talk about a number of available cue systems which are present, including print.	
In short, if we are to ever live outside our present set of assumptive bounds, the choice of which constraints are to operate need to be the language user's.	
It was Alison's refusal to play within the bounds we set up in these initial questions which allowed us to understand the limits we had set for both ourselves and the language user.	
Since these limits were dysfunctional in terms of our goals, we decided this change was theoretically necessary.	
An illustration is Alison's responses to Jell-O.	
We collected data on 3 consecutive days.	

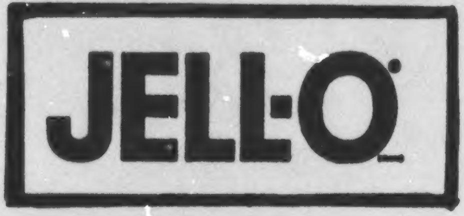
5.4 (Continued)

TEXT	SUPPORT MATERIALS

The first day we showed Alison a box of Jell-O and asked her, "What do you think it says?"


DELICIOUS
PIE
strawberry ARTIFICIAL FLAVOR
JELL-O
gelatin dessert
FOUR 1/2 CUP SERVINGS
NET WT. 3 OZ.

The second day we showed Alison just the print taken from the box so it retained all original color, logo, and graphic cues.



The third day we showed Alison Jell-O typed on a primary typewriter in mixed type.

Jell-O

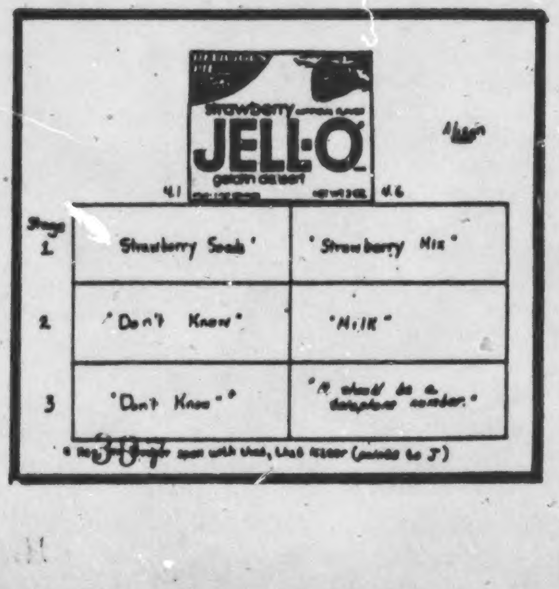
We did this twice, once when she was 4.1, and once again when she was 4.6.

Now let's examine the responses we received.

On the first occasion, Alison responded, "Strawberry Seeds," when asked, "What do you think this says?"

In Stage 2, with the print extracted from the box, Alison responded, "I don't know."

In Stage 3, Alison again responds, "Don't know."


Alison
4.1
4.6

Stage	4.1	4.6
1	"Strawberry Seeds"	"Strawberry Mix"
2	"Don't Know"	"Milk"
3	"Don't Know" *	"It could be a telephone number."

* [illegible] with that, that letter (points to J)

5.4 (Continued)

TEXT	SUPPORT MATERIALS
But then she gives us an aside, "Hey, my brother spells with that, that letter," as she points to the J.	
Her brother's name is Jason.	
So isn't it interesting; the very data in Stage 2 which we take to assure ourselves that she's not using print, turns out to be misleading.	
For her aside in Stage 3--a setting in which there is even further abstraction of the print--triggers her recognition of the similarity between the _J_ in _Jell-O_ and the _J_ in her brother's name, _Jason_.	
So what does this tell us?	
Well, it tells us that "Don't know" in Stage 2 doesn't tell us what we thought it told us.	
In fact, it's just the opposite.	
Now we're pretty sure that rather than not using print to make her decision in Stages 1 and 2, she probably did.	

5.4 (Continued)

TEXT	SUPPORT MATERIALS
The word Strawberry is after all on the box.	
All we know is that when the print setting in Stage 1 brought to mind strawberries, and when there was no conflicting evidence in the print setting, she's satisfied and goes with her lead.	
It's important to understand we do the same thing.	
Look at this particular newspaper clipping.	Two Car Accident Sends 10 Students to hospital See 378A
Assume that it appeared in your local paper.	
You would surely think as I did that some tragic accident had occurred involving many families you know.	
But lo and behold, when you start reading the text, you find out that the article is about a simulated Red Cross exercise, not a local youth tragedy at all.	

5.4 (Continued)

TEXT	SUPPORT MATERIALS
Now when you go back and read the headlines you note something different; something you overlooked initially.	
You've learned something about language.	
Because newspapers carry news and often bad news at that, the sum of our past encounters allows us to anticipate the worst.	
Our reading of the headline only confirmed our newspaper-tragic-story-expectancies so we are satisfied with our predictions.	
It's only as we take in more information, that doesn't match, that we go back to resample.	
And then we see what the author of this piece thought we'd see all along.	
**	
Well, children, too, elect what print will be processed in light of their first leads.	

5.4 (Continued)

TEXT	SUPPORT MATERIALS

And then, like us, are satisfied when divergent elements of the event have been orchestrated.

Reading is, as such, more a language event than a language act.

And so we come to see any instance of written language use and learning as the complex social event it is, and we've learned something.

**

All we know when Alison says she doesn't know in Stage 2, is that she knows when she doesn't know.

What was out there in the print setting did not jive with her conception of the setting, so she had no more hypotheses to test.

But it's important to understand that while we don't know what role print played, we are fairly confident it was a factor in her decision.

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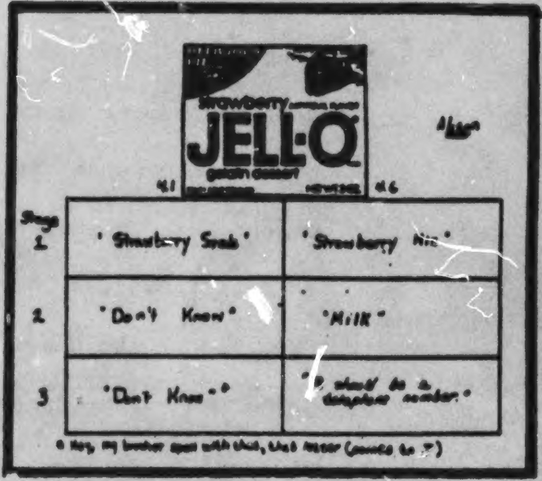


Stage		
1	'Strawberry Snack'	'Strawberry Milk'
2	'Don't Know'	'Milk'
3	'Don't Know'*	'[illegible] number.'

* Hey, my brother [illegible] with that, that [illegible] (points to [illegible])

5.4 (Continued)

TEXT | **SUPPORT MATERIALS**

Never leaving well enough alone, let's examine what Alison does at 4.6 on the same task.

When shown the Jell-O box in Stage 1, Alison responded, "Strawberry Mix."

Not a bad decision given the print setting.

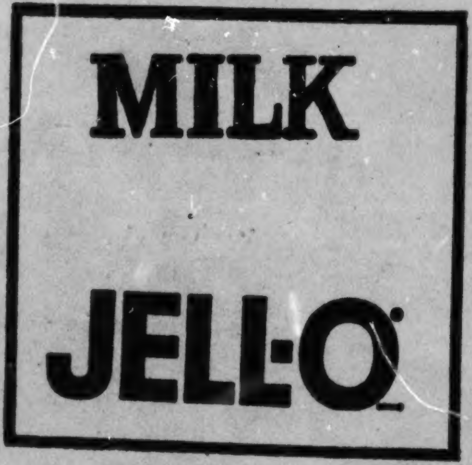
In Stage 2, she responds, "Milk."

"Now, come on!", you've got to be saying, "Clearly, she wasn't using print there."

But before we jump to conclusions, let's take a closer look at Milk and Jell-O.

When we do that we are immediately impressed.

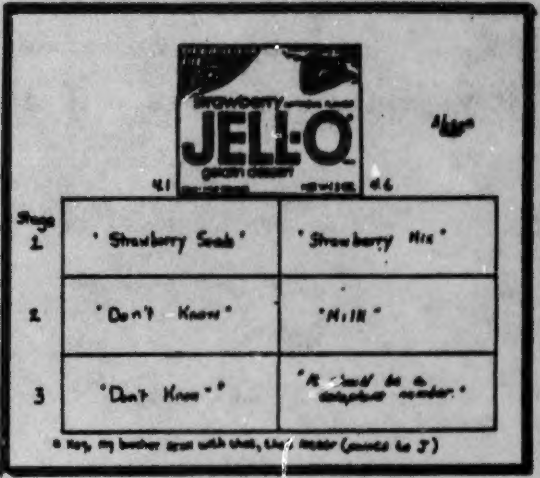
Alison sees something we didn't see--the relationship between Milk as it appears on a Kroger's 1/2 gallon milk carton, and Jell-O as it appears on a box of Jell-O.



5.4 (Continued)

TEXT	SUPPORT MATERIALS

So the very response that looks like it should confirm our decision that Alison knows little about print. upon closer examination indicates she may know more than we. Not only is Milk about as long a word as Jell-O but it shares much graphic similarity of style. Since we used both Kroger's Milk and Jell-O in this task, the very parameters we set up by the research setting, sets cognitive parameters within which Alison seems to be operating. What Alison shows us, then, is that she is orchestrating much; the relationship between alternate print settings and the length of print likely to be found, the graphic style of print and its similarity across items of print in a given print setting, as well as her knowledge of the range of products



Stage		
1	'Strawberry Snack'	'Strawberry Mix'
2	'Don't Know'	'Milk'
3	'Don't Know'*	'It could be a telephone number.'

* Yes, my brother eats with that, that means (points to J)

5.4 (Continued)

TEXT	SUPPORT MATERIALS
used in this research setting, a parameter within which she operates to select her response.	
Print has clearly played a role in the decisions which Alison made.	
So the very responses which we might take as evidence of not attending to print, prove not only her attention, but her sophistication as a written language user.	
Clearly the advent of literacy cannot be said to occur when the child's observed response matches the adult's expected response or we have no continuum of development, just an On-Off switch (Harste, 1980).	
The advent of written language literacy must be defined in terms of when evidence exists that some decision has been made in the face of print which otherwise would not have been made.	

5.4 (Continued)

TEXT	SUPPORT MATERIALS
Alison, not only demonstrates her sophisticated decision-making abilities, but further, what that process begins to involve when viewed as an orchestrated, complex social event. In Stage 3 we showed Alison Jell-O typed out in primary type and asked her what she thought it said. Alison paused a moment as if in reflection and then responded, "It should be a telephone number." Most everything in the print setting--the 2 l's which she negotiated as ones, the hyphen, and the O which she negotiated as zero, compelled her to think, "telephone number." Yet she's tentative, "It should be a telephone number," showing us clearly not only the process she went through in reaching her decision, but giving us a real feel for the process of orchestration involved in sense-making from print.	

5.4 (Continued)

TEXT	SUPPORT MATERIALS
And now that I have shown that we have lots of evidence that Alison has used print in each of her responses to Jell-O, let me pose a hypothetical case.	
**	
Let's suppose Alison would have responded "Jell-O," just once. What conclusions would we have drawn or thought we could have drawn? That print is a sufficient condition?	
**	
When children play within our meaning world we learn nothing. It is only by playing in a world for which we are not ready that we are forced to take on new explanations; new meaning; to become in a sense a head taller than ourselves (Harste & Carey, in press). We don't learn from those things we're ready for; we learn from those things we're not ready for.	

5.4 (Continued)

TEXT	SUPPORT MATERIALS

What's true for the written language learner, is also true for the written language teacher and the written language researcher.

And one of the things we weren't ready for when we started our research was the range of responses which Alison gave to the print settings we placed before her.

Some of Alison's responses seemed to be responses to other questions like:

- Tell me something about this?

and

- What is this?

Yet, we never asked these questions.

The question we asked was, "What do you think this says?"

So what Alison taught us is that language is negotiable.

That we as language users have choices to make as to whether or not we will engage in the communication contract set before us.

What do you think this says?

Print Setting	Response
Toss Across Game	Well, the game players get bags and throw them into the spaces.
U.S. Mail	The eagle is mean, but watch out for it. It might slap your head off.
Bloomington	It's a sign.
Burger Chef	Burger Chef cup.
Lego	Lego
Kroger Milk	Milk
No Parking This Side	No Parking The Side
Puffs	Kleenex

5.4 (Continued)

TEXT	SUPPORT MATERIALS

And Alison explicated what those choices were by:

- not responding;
- attempting to invalidate some contracts by saying, "I don't think I can read it";
- by renegotiating the contract to be some question which she wished to answer;
- but, most often, by engaging in or maintaining the contract.

We broke some of these options up, so the final taxonomy has 7 categories, but some types like 2, 4, and 6 are particular types of renegotiation.

So one of the things Alison taught us was the importance of looking at language from a pragmatic perspective.

This pragmatic perspective is extremely important as it is clearly inappropriate to ask certain questions

Reader Communication Decision

Q: What do you think that says?

.1 No Response
Example: Ruffs^{3} (Alison 4.1)

.2 Attempts to Invalidate Contract
Print: Evel Knievel Chopper^{8}
Alison (4.6): "I don't think I can read it."

.3 Don't Know
Example: Jell-O^{4} (Alison, 4.1)

.4 Symbol Focus: Naming/Sounding Out
Print: Kroger Eggs^{3}
Alison (4.1): "S~~" (pts to 'S')

.5 Pseudo-Reading
Print: For Sale^{2}
Alison(4.1): "Seem-why-tit

.6 Renegotiates Communication Contract
Print: Bloomington^{4}
Alison (4.6): "It's a sign."
Print: Evel Knievel Chopper^{1}
Alison (4.1): "Motorcycle" Box"

.7 Maintains Communication Contract
Print: Crest^{2}
Alison(4.1): Toothpaste
Print: Lego^{4}
Alison (4.5): Legos

5.4 (Continued)

TEXT SUPPORT MATERIALS

of the response if the initial communication contract is not maintained.

Alison taught us to be careful observers in this regard, for sometimes she used the same surface structure to both maintain and renegotiate communication contracts.

We had to listen carefully for prosadic shifts; for a response such as this [Coke Cup] could be either a renegotiated contract (if it were said as a response to a renegotiated question such as "What is this object?"), or a maintenance response (if it were said as a response to the question we asked; namely, "What do you think this says?").

Coke Cup

Making such decisions is not always easy, though reading responses tend to be drawn out and have less

5.4 (Continued)

TEXT	SUPPORT MATERIALS
of an undulating intonation pattern than do renegotiated responses which refer to the object.	
Fortunately most renegotiated responses also include the noun marker--"a Coke cup," and this together with the right prosadic shifts confirm the decision.	
I've said making these decisions is not always easy, but to ignore the existence of pragmatics once one has felt its importance, would be even more difficult.	
While I'm sure we make errors, and this in spite of the fact that we have gotten interrater reliability to be .94, we are better off to be wrong than to act as if we were ignorant.	
Some researchers don't seem to understand this.	
One wonders, for example, how much of the mythology in beliefs such as "Oral language is learned, but	

5.4 (Continued)

TEXT	SUPPORT MATERIALS
written language is taught" is predicated on data which ignored the complexity of the written language event.	
Alison used all of the options available to any language user: 1. sometimes she maintained the contract; 2. sometimes she renegotiated it, and 3. sometimes she attempted to invalidate it.	
Whatever her decision, her understanding and application of language use in social context is an extremely important component in our understanding of the process.	
I want to elaborate on that, for in a real sense Alison helped us discover pragmatics not just as an entity but as a true fourth system of language.	
We began our research with young children with a view of language as	

5.4 (Continued)

TEXT	SUPPORT MATERIALS

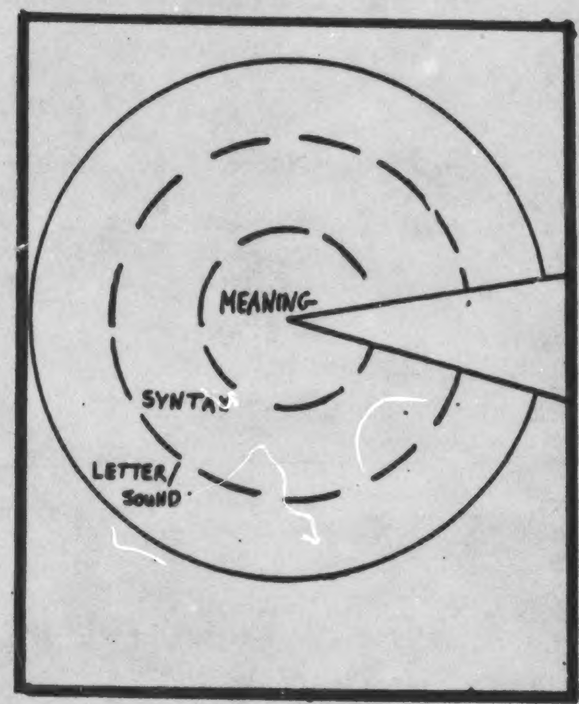
being composed of the 3 systems; a core semantic or meaning system, encircled in a syntactic or lexicogrammatical system, and sheathed in a graphophonemic system.

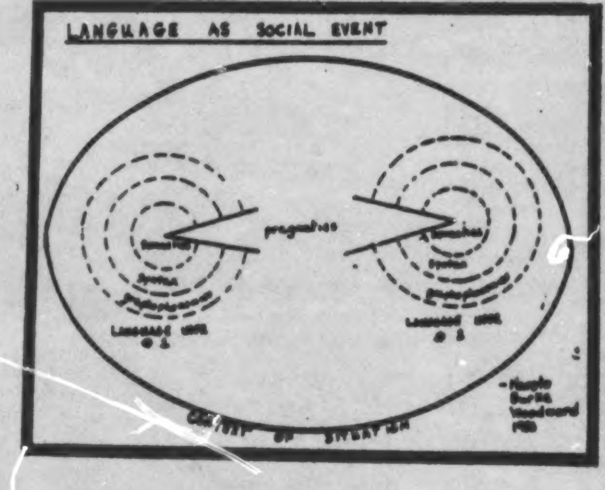
What Alison taught us, however, is that pragmatics permeates these systems; that language is social; and, that one is always involved in interaction with another language user, either real or imposed.

Pragmatics then is the system which ties language users.

Once a certain pragmatic condition has been established, subsequent responses must be interpreted in light of this past event.

For example, as our research progressed, we showed Alison product after product always asking her the same 4 questions:


MEANING
SYNTAX
LETTER/
SOUND


LANGUAGE AS SOCIAL EVENT
pragmatics
CONTEXT OF SITUATION

5.4 (Continued)

TEXT	SUPPORT MATERIALS

- What do you think this says?
- Show me where it says it.
- Tell me where you've seen this before.
- Can you tell me anything else about this thing?

In some instances Alison answered all four questions simultaneously:

- "Coke cup" (underlining it as she said it). I always had a coke cup. Nothing else but that"; knowing full-well what was coming and she might just as well get it over with.

On another occasion the researcher forgot to ask question 2, "Show me where it says it?" and skipped instead to question 3.

On this occasion Alison said, "You forgot to ask me to show you where it says it, Silly."

Pragmatics was not just an evolving system of social rules, but a

5.4 (Continued)

TEXT	SUPPORT MATERIALS
parameter which defined the world of meaning in which these current behaviors must be interpreted.	
The pragmatics of the setting became the context of situations in which current language processing operated and from within which it must be understood.	
The range of potential meaning in the research situation was limited by the parameters of meaning which had been established during past encounters in this setting.	
In an important sense our research setting limited the range of possible meaning available to Alison.	
What had transpired previously set parameters on the range of cognitive processing operations in which Alison was engaged.	
Rather than reflective of true cognitive processing, what Alison's behavior demonstrated in this	

5.4 (Continued)

TEXT	SUPPORT MATERIALS
instance was her ability to operate within the perceived constraints of the language setting we had established.	
But what an insight into language use and learning?	
The very constraints designed to insure interpretability and facilitate our understanding of growth and development limited rather than explicated cognitive processing.	
It is only by altering constraints, whether real or perceived, that we can help children release the linguistic resources which they have available and from which they can become.	
So what does this mean instructionally?	
It means that children come with many past experiences related to their role in language learning and how they are to operate.	

5.4 (Continued)

TEXT	SUPPORT MATERIALS
When they are constrained--either perceived or real--by correct spelling; when they are constrained--either perceived or real--by neat penmanship; when they are constrained--either perceived or real--with standard grammatical convention; each of these constraints limits the linguistic resources which are accessible to them.	
The net result is that both we and they confuse convention for language; constraints for potential.	
By making written language learning unnecessarily constrained, we mystify the process of written language growth and development.	
If we want to see what written language potential exists, we must alter those constraints, whether perceived or real, and thus free potential.	

5.4 (Continued)

TEXT	SUPPORT MATERIALS
In a very real sense, until we understand written language growth and development within the constraints of the child's own linguistic resources, rather than within the parameters of our own constraints, we can never really address the issue of what is optimal instructionally.	
There is probably no better educational experience than for teachers to take the opportunity to sit down and observe children in the process of written language use and learning without for once feeling the need to intervene.	
Language learning is a 2 way street.	
Because of the sociological nature of the classroom, it is potentially an ideal language learning environment.	
What looks like a major constraint becomes a major resource from an alternate theoretical perspective.	

5.4 (Continued)

TEXT	SUPPORT MATERIALS
When we take responsibility for observing and understanding child language growth and development we gain 2 benefits: first, we are likely to come to better understand what constraints are operative and thus decide on needed interventions to eliminate them; and second, we learn much about language and children. Not bad side benefits for both the language learner and the language educator.	

5.5 WRITTEN LANGUAGE DEVELOPMENT: A NATURAL CONCERN

by
Jerome C. Harste
Indiana University

*Speech given at the NIE-FIPSE
Grantee Workshop, Los Angeles,
September 25, 1980

TEXT	AUDIO-VISUAL SUPPORT

I've entitled my presentation, "Written Language Development: A Natural Concern."

* * *

There are three things that I feel we can say with confidence about written language growth and development from our research with 3, 4, 5, and 6-year olds.

These insights into written language literacy seem to have immediate applicability to persons working at all phases of development.

* * *

INSIGHT ONE: The very complexity of the written language event supports control.

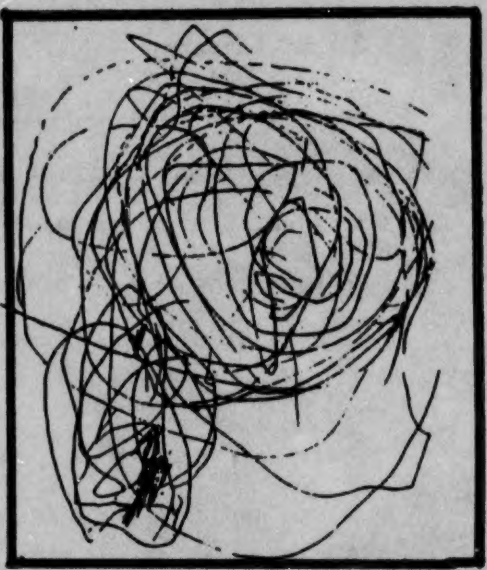
One of the research tasks which we used involved giving children a blank sheet of paper and a felt-tipped pen and asking them to

5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT

write their name and anything else that they could write.

Latrice, age 3, is atypical of our data in that her product raises doubt as to what distinctions she has made.



Latrice, however, said that she wrote her name and that she made a dog and a "Mickey Mouse."

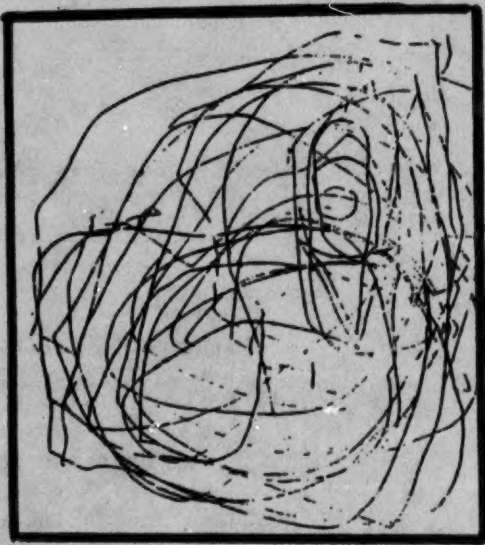
Under this condition, about 33% of the products produced by 3-year olds do not reflect a clear distinction between writing and drawing.

* * *

Another of our research tasks, however, involved giving the child a blank sheet of paper and pen and asking them to draw a picture of themselves.

Here is Latrice's masterpiece:

A cute little thing, isn't she?

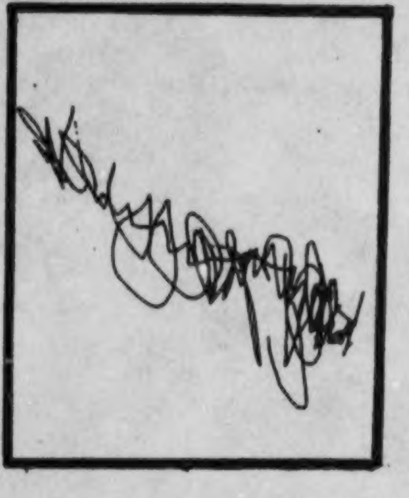


5.5 (Continued)

TEXT AUDIO-VISUAL SUPPORT

Once Latrice completed her self-portrait, we asked her to write her name on her paper.

Latrice turned her paper over and signed her name.



* * *

So what do these data tell us?

Well first of all, that under this later condition Latrice perceives art and writing differently.

Art is a global, circular, cohesive marking on paper.

Writing is a linear and intensive marking on paper.

When we look across tasks, they tell us that under certain conditions Latrice distinguishes writing from drawing, while under other conditions this distinction is less clear.

What are these conditions?

Recall that under the condition where she made a distinction we initially had asked her to draw.

5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT
Our request here corresponds to the type of request which typically we might suppose adults ask of 3-year olds.	
That is to say, most adults assume 3-year olds draw but don't write--the latter being a task many see as inappropriate even for 6-year olds.	
For the child, then, the pragmatics of this research setting (adult + child + paper and pen = draw) matches the semantics of the request.	
Once Latrice has committed herself to a course of action in this setting; namely drawing, our second request, "Write your name," pragmatically, then, signals her that some other behavior is desired.	
This pragmatic signal alerts the child to a semantic monitoring of the text.	

5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT
Under this high contrast condition, when we're sure that the child has understood our request to write, nearly 100% of the 3-year olds show us that they distinguish writing from drawing.	
That's nearly a 33% increase!	
I have to say nearly because Joan Chubb, a research assistant on our project, has also found an interaction between the request to write and the instrument given the child to write with.	
When you give 3-year old children a pen and request that they write, as opposed to giving them a crayon and making the same request, 100% of the children write as opposed to 75% who do so with a crayon.	
Of these 75% who will write with a crayon, most select a darker colored crayon to write with than that used in their art, to set off the	

5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT
fact that this is now writing as opposed to what they were doing: namely, art.	
* * *	
Written language is a complex event, but our young language users show us that it's the very complexity of the event that supports control.	
Children in our sample monitored elements within the context of situation, as well as pragmatics and semantics to make literacy--real literacy decisions.	
When cues converged, as they do in most natural language settings, the quality of their decisions improved.	
Any instance of written language use is best viewed as the orchestration of a complex social event.	
This advice is almost the opposite of that currently undergirding instruction; where the notion prevails that one must simplify the	

5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT

process to make it accessible, where language is studied bit by bit, where the support of context and multiple cues are all too often absent.

If our data mean anything, what such practices constitute are 3 quick lessons in how to make writing hard.

* * *

INSIGHT TWO: Written language literacy is a multimedia event.

We showed children a variety of household products, toys, road signs, and quick food places.

In each instance we asked, "What do you think this says?"

Of the responses which we received from children who decided to answer our question, 97.7 percent were semantically acceptable; that is, they made sense given the semantic rules we as adults use

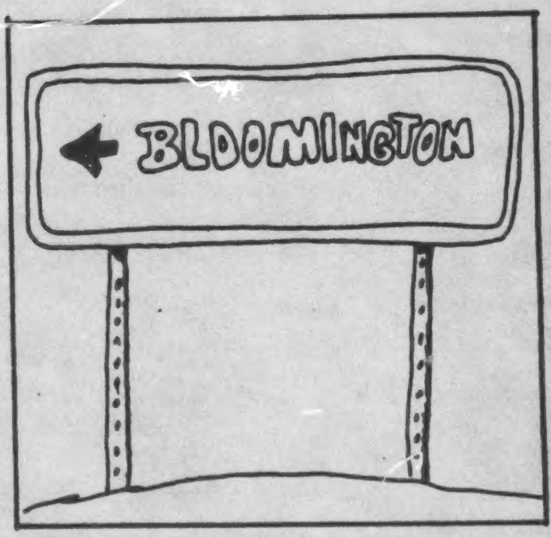
5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT

in labeling environmental print in the first place.

There were, however, some rather interesting responses.

In our first study, conducted in Bloomington, Indiana, we used a picture of an actual road sign indicating the town.



To our question, "What do you think this says?", 3 of the 20 children studied responded, "Book."

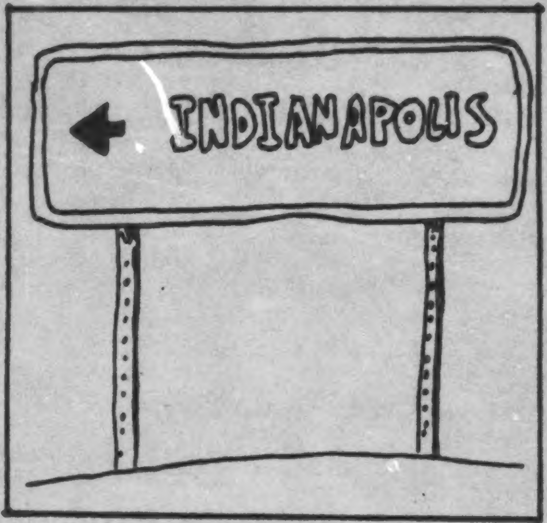
Our explanation, at the time, was that the children saw the B and two O's and came to their decision.

This explanation was problematic as it went against other findings which led us to conclude that access to written language literacy was pragmatically and semantically based.

When we moved to Indianapolis to conduct our second study, we changed road signs to give this

5.5 (Continued)

TEXT **AUDIO-VISUAL SUPPORT**


INDIANAPOLIS

sample the same advantage our Bloomington group had had.

But lo and behold, 7 of the 48 children in this study responded to Indianapolis as "Book."

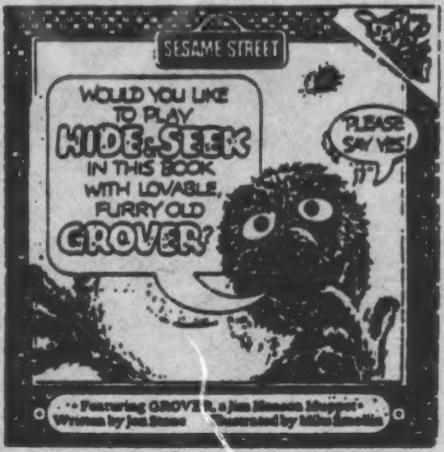
Clearly a graphophonemic explanation wasn't appropriate here.

How did they do it?

One child gave us a cue by mentioning Sesame Street as part of his response.

Margie Siegel, one of the very clever graduate students on the project, put 2 and 2 together and said, "Eureka!"

She then went to the library and produced this.


SESAME STREET
WOULD YOU LIKE TO PLAY HIDE & SEEK IN THIS BOOK WITH LOVABLE, FURRY OLD GROVER?
PLEASE SAY YES!

On every Sesame Street book is a Sesame Street sign!

So what looked like a graphophonemic response was a semantic response.

By using the multiple cues which were present in the written

5.5 (Continued)

TEXT **AUDIO-VISUAL SUPPORT**

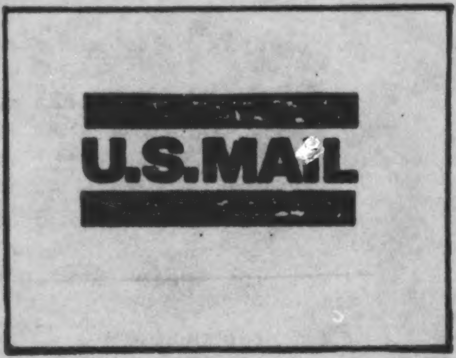
language setting, children actively sought an appropriate context of situation in which what they saw would make sense.

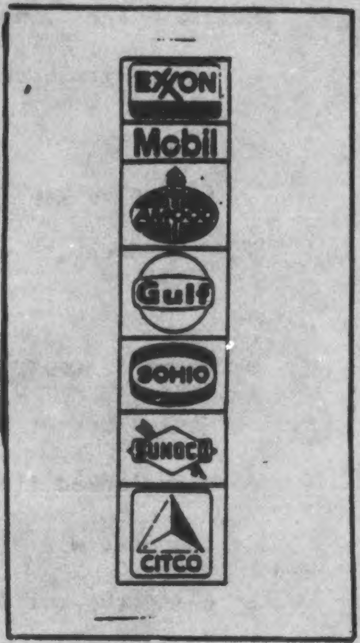
* * *

A similar experience occurred with the print setting U.S. Mail. Here again several children responded in a fashion which initially appears nonsensical; namely by saying, "Gas Station." However, if one compares U.S. Mail to the various logos advertising gas, one has to conclude the children see more than we do. For clearly the children are right: the post office should sell gas--it has the right design, the right print field, the right print style, and in many cases, the right colors.

* * *

This sensitivity to visual cues is not a pseudo form of reading,





5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT
but real reading.	

* * *

Think of the mental gymnastics involved in reading "Texaco" for "U.S. Mail" as one young reader in our sample did.

* * *

Experiences such as this have led us to speak of children as encountering print settings as opposed to just saying they have encountered print.

Print Setting is used to focus attention to the fact that a variety of multimodal cues exist in any instance of print which not only operate to orchestrate meaning but facilitate cognition.

* * *

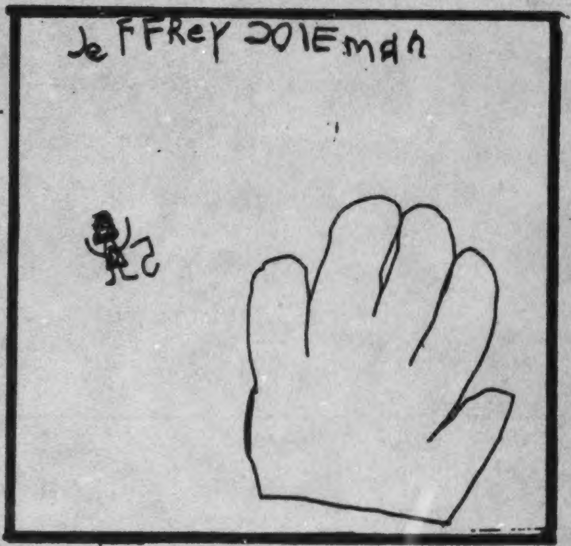
To improve language instruction, the faster we abandon the notion that meaning resides in print, the better.

* * *

5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT
It is not accidental that the word text appears within the word context.	
* * *	
Written language is a multimedia event, providing multimodal cues to meaning, schema access and comprehension.	
* * *	
And let us remember that schema are multimodal too.	
That's why if you want language users to read, you give them a pencil and let them scribble; if you want them to write, you give them a book and let them read.	
* * *	
Schema aren't fussy learners.	
* * *	
In every sense, from perception to schema access, written language literacy is a semiotic event.	

5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT
This notion of written language as a semiotic event is not only important from the perspective of perception, but also from the perspective of production.	
Children in our sample freely moved to drama, art, numerals, and speech, not only in an attempt to placehold their meaning, but orchestrate a complex semiotic display with convergent meaning potential.	
The lines which we draw between the expression of language as well as between the alternate communication systems are arbitrary.	
To continue our focus on these lines constitutes a failure on our part to understand, and a distraction to our students in terms of increasing their meaning potential.	

* * *

5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT
INSIGHT THREE: Literacy, meaning, and language growth are context specific.	
Another way to say this is that a complex, but important, relationship exists between linguistic resources on the one hand, and linguistic potential on the other.	
Written language literacy is not a monolithic skill which once learned can be universally applied.	
In its specific detail the act of writing itself depends on the situation produced by children in our study under 3 conditions.	
Under Condition 1, children were handed a picture story book and asked to read or pretend to read the selection.	
Under Condition 2, children were given a box of objects and asked to select 2 or 3 with which they might tell a story.	

5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT
Under Condition 3, children were given a blank sheet of paper and told, "Today we are going to write stories. You write your story on your sheet of paper, and I'll write my story on my sheet of paper. When we get finished, we'll share our stories with one another."	
Now, let's examine the products.	
Under Condition 1, children frequently gave personal anecdotes which seemed to be triggered from elements available in the text pictures.	
Ben, age 4, for example, on seeing a jeep in one of the pictures, recounted that his daddy's car had a squeak and that his daddy had tried to fix it.	
Later, upon encountering a picture of some bears eating, Ben recounted how he and his family were	

5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT
going to have Thanksgiving dinner at his house, and how they were going to have cranberries, and how he hated cranberries.	
Each picture in turn signaled a new episode to Ben and resulted in his sharing a series of them as his response to this task.	
Under Condition 2, the typical pattern was either to provide a label for the objects which had been selected, or to combine their label with a functional description of the use to which the object could be put.	
Often these too became rather disjointed affairs.	
Ben's story under this condition was: "A spoon. My eat ice cream with a spoon. Money. Use money."	
In contrast, the performance of Ben and other children in our sample under Condition 3 is truly surprising.	

5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT
When given a blank sheet of paper and asked to write or pretend to write a story--seemingly the least supportive environment--children at all ages tend to generate a composition which reflects the elements of adult story grammar as defined by Stein (1978).	
Ben's story, under this condition, involved a setting including a protagonist (Him have a hat), an initiating event (Them it blow away), an attempt (Him want help buy a new hat), and a consequence (And him put that, and a whole bunch of hats come down.)	
While clearly this is not the most internally coherent story ever written, it does demonstrate that Ben has abstracted out of his past experiences with stories in his culture, that structure which is endemic to folktales.	

5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT
So what do these alternate performances tell us?	
They seemingly tell us that Ben exhibits more or less control, given the measuring stick of story grammar, depending on the conditions under which that information is tapped.	
But this is a shallow interpretation of the data indeed.	
It's not that Ben and other children know more or less about storiness under varying conditions, it's that they focus on varying elements and relationships.	
Ben clearly demonstrates his knowledge of adult story grammar forms in his performance under Condition 3; he simply demonstrates other dimensions of his knowledge about storiness and its relationship to context of situation under Conditions 1 and 2.	

* * *

5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT
What is out there in the setting, dynamically interacts with what is known; the orchestration of which becomes a new event both for language hypothesis testing and language learning.	
To impose a single cultural conventional form upon the products which children produce, be it adult story grammar or any other one we can think of, is to deny the generative nature of language and meaning in the creation of the languaging event.	
Each written language encounter provides not only the opportunity to inventory what is known, but new opportunities to maintain and generate meaning.	
* * *	
The message in these data is clear: To understand written language growth and development we simply	

5.5 (Continued)

TEXT	AUDIO-VISUAL SUPPORT
must stop confusing convention for language. * * * Much of what we now see as development is but an artifact of current and past instruction, the constraints operating in the language setting we have established, and/or a function of the conventional bifocals through which we view language growth. * * * Until we can appreciate the hypotheses children test about language rather than see growth and development as the testing of our language hypotheses; until we can sort out what is natural development from what is artifactal development; we simply will never be able, I believe, to address the issue of optimum instruction.	

END.

5.6 REDEFINING DEVELOPMENT: THE CHILD AS INFORMANT (Introduction to Symposium)

Linda Crafton
Northeastern University

*Speech given at the Annual Meeting of the National Council of Teachers of English Convention, Cincinnati, November 23, 1981.

TEXT	SUPPORT MATERIALS

Welcome to the session on Re-Defining Development: The Child as Informant.

I'm Linda Crafton from Northeastern University, and I will be serving as the Chairperson of this session.

The recorder will be Joan Chubb from Indiana University.

Our 3 speakers will be Virginia Woodward, Carolyn Burke and Jerome Harste. They are all from the faculty of Indiana University.

The information which we will be sharing with you in this session was generated from a series of studies spanning a 5 year period.

Funding for the various projects has come from the Proffitt Foundation, N.C.T.E. and N.I.E.

Both Joan Chubb and I have acted as research assistants on these projects.

5.6 (Continued)

TEXT	SUPPORT MATERIALS
To date we have had 68 informants who have ranged in age from 3 to 6 years. These children come from lower, middle and upper socio-economic circumstances, represent both black and white, and reside in both suburban and urban settings.	
Some of the children have been on-going informants to the studies for 5 years. Each has participated in 5 tasks which call on them to use reading and writing strategies.	
Today our speakers will be using language examples from our informants to discuss 3 needed perspectives for mapping written language development.	
These 3 perspectives, in the order in which they will be discussed, relate to:	

5.6 (Continued)

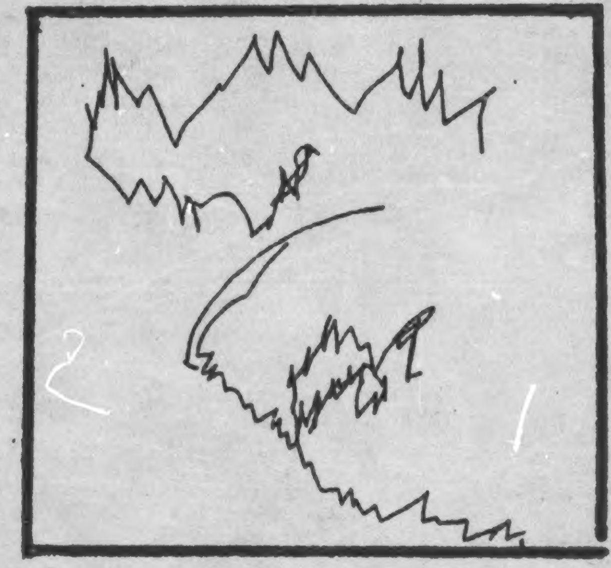
TEXT	SUPPORT MATERIALS
- confusing product with process	
- confusing growth with experience	
- confusing convention with language.	

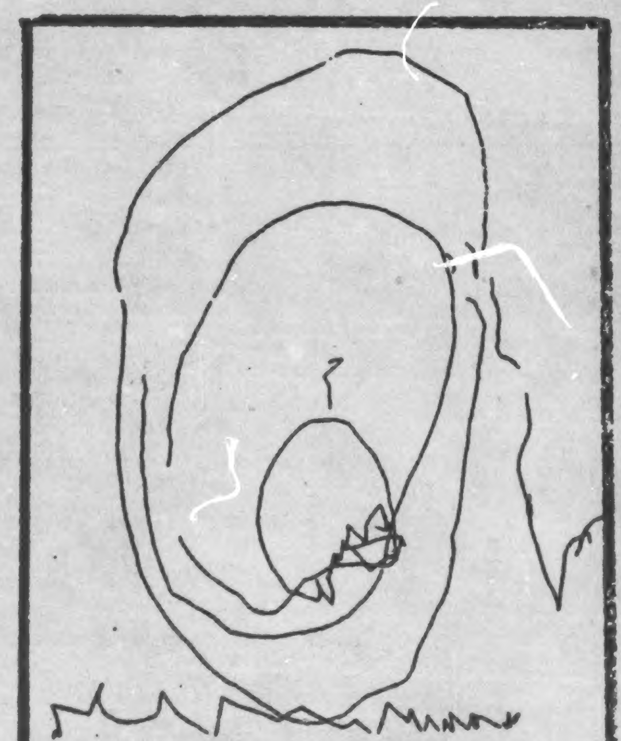
5.6.1 ON CONFUSING PRODUCT WITH PROCESS

Virginia A. Woodward
Indiana University

*Speech given at the annual Meeting of the National Council of Teachers of English Convention, Cincinnati, November 23, 1980.

TEXT SUPPORT MATERIALS





Recently I asked a preschool teacher to have her 3-year olds sign in each day to help her keep attendance and help me trace written language growth and development.

I made booklets for her so each child could write their name on a clean page each day.

When I offered her more booklets, she told me, "This isn't working. The children aren't writing."

* * *

But let's examine one child's attempt at writing his name and anything else that he could write.

When one contrasts this child's writing with his art (top portion of overhead), and compares it also with his signature on his art (bottom portion of overhead), one

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

simply has to conclude, despite the adult chauvinistic eyes of the teacher, that indeed the child is not only writing, but already able to distinguish the difference between art and writing.

* * *

In this instance the teacher's adult eyes fail to allow her to recognize the marvel of written language literacy in process.

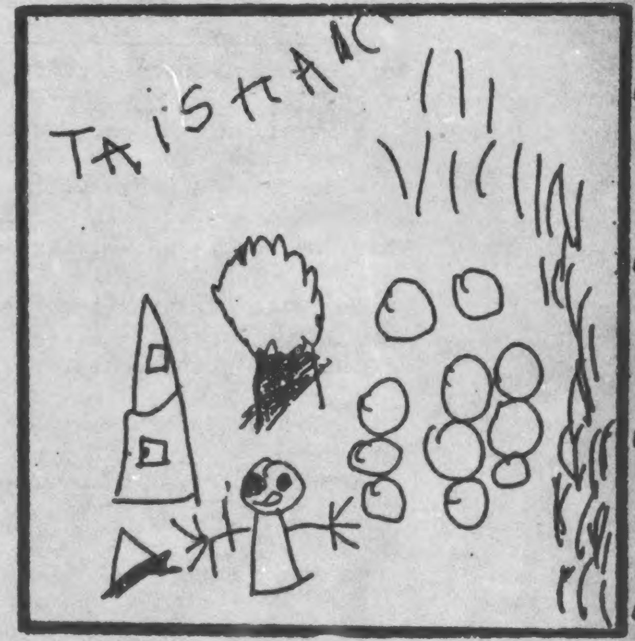
* * *

Teachers and parents often view early drawing in much the same way as they view early writing, decreeing both "scribbles."

It is only when the product looks representational to our adult eyes that we become excited.

A case in point is Taisha:

Because Taisha's representation of her name as well as her representation of people, houses, snow and rain coincide with our notions



5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

of how these are to be represented, these products take on value.

* * *

For all too many adults, to know is to represent the world in terms of our templates.

But, this serves neither us nor the child very well.

* * *

My first argument then today is that the young child is a written language user long before his writings look representational to our adult eyes.

And it's important to understand that I am talking about real written language literacy.

The decisions which the young child makes are both in form and in kind like those which we as literate adults make.

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

When we confuse product for process, we fail to note the onset of literacy and in so doing fail to appreciate the real literacy achievement which 3-year olds have made.

* * *

To illustrate this point let's examine the products which Terry produced under two conditions.

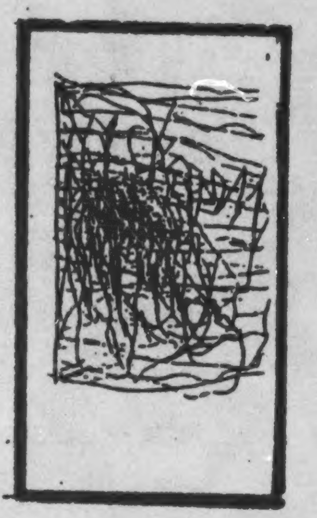
In the first, Terry was asked to write his name and anything else that he could write.

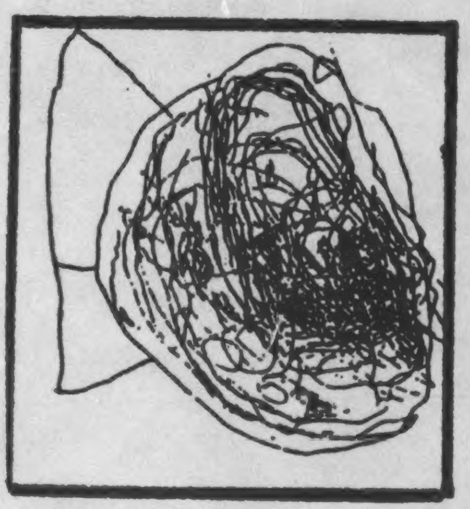
In the second, Terry was asked to draw a picture of himself and write his name on the picture once he was done.

I'm not going to tell you which product is which. Can you guess?

If you are like most persons with whom I shared these products, you will have guessed wrong.

The 'E' with a filled in circle is art; the other, Terry's writing.





5.6.1 (Continued)

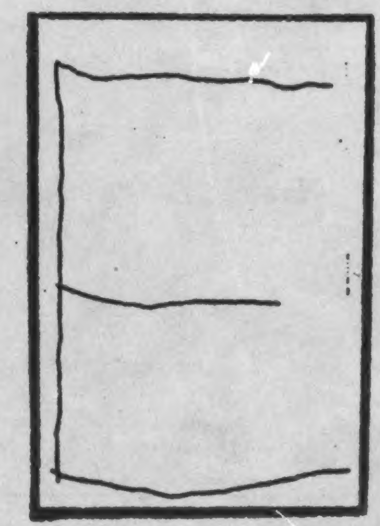
TEXT

SUPPORT MATERIALS

But whichever they are, we can all agree, or will do so shortly, that they are not scribbles!

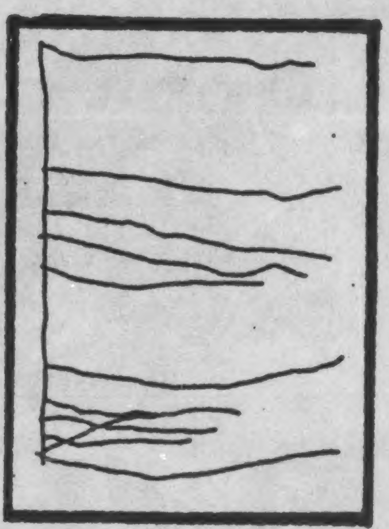
If one examines the process rather than the product, the basis for making the decision that these are not just scribbles becomes clear.

In writing, Terry's first four marks formed a perfect letter 'E' which he declared his name.



He added a few more lines and in this fashion evolved the final product you have seen.

But it's important to note that already at 3, Terry has invented a symbol to represent his name.



We know it is a true symbol because Terry uses it consistently to represent his name between and across tasks.

Terry's writing, in addition, shows linearity and organization.

5.6.1 (Continued)

TEXT **SUPPORT MATERIALS**

Terry wrote for 25 minutes in producing this product.

(So much for "short attention" span and the preschool child!)

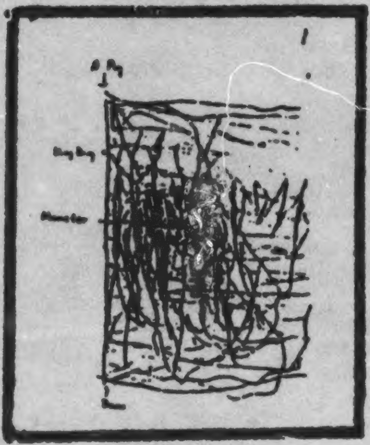
When asked to read his writing, Terry read, "A pig. King Kong. Monster. [And] down," pointing to the places which I have marked in his writing.

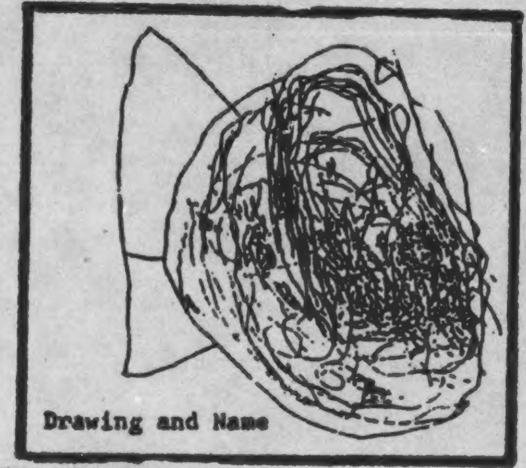
Terry's picture of himself contrasts sharply with his drawing.

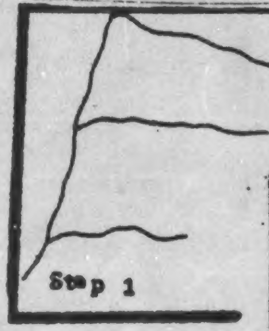
Art for Terry is global and circular and as such contrasts with the linearity of what writing is for Terry.

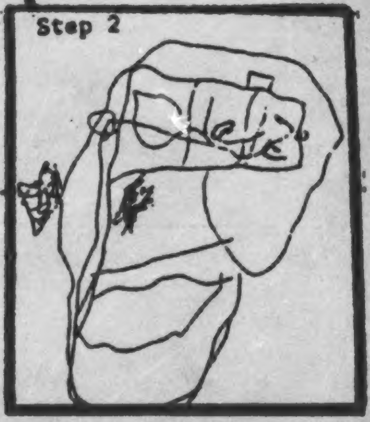
Terry began his self-portrait with the letter 'E'.

Terry's masterpiece evolved from this letter form; yet, Terry's decisions here are quite different from those made during writing--a fact which is evident in his emerging product.




Drawing and Name


Step 1


Step 2

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS
Art is often thought to develop ahead of writing and many even argue that children learn letter forms from their work in art, but Terry and I challenge that view.	
The decisions which Terry has made about writing facilitate his growth and development in art and vice versa.	
The relationship here is a reciprocal one which when contrasted for the child becomes mutually supportive to written language literacy in the broadest sense.	
Terry here demonstrates what we already know; that the lines we as adults have drawn between art and writing are arbitrary.	
In fact it is Terry's failure to let these lines disturb him which allows him to access the symbolization process of written language and hence literacy.	

5.6.1 (Continued)

TEXT SUPPORT MATERIALS

Terry does distinguish art from writing.

But it is important to understand that it was access to the process and not just the product which led us to this conclusion.

* * *

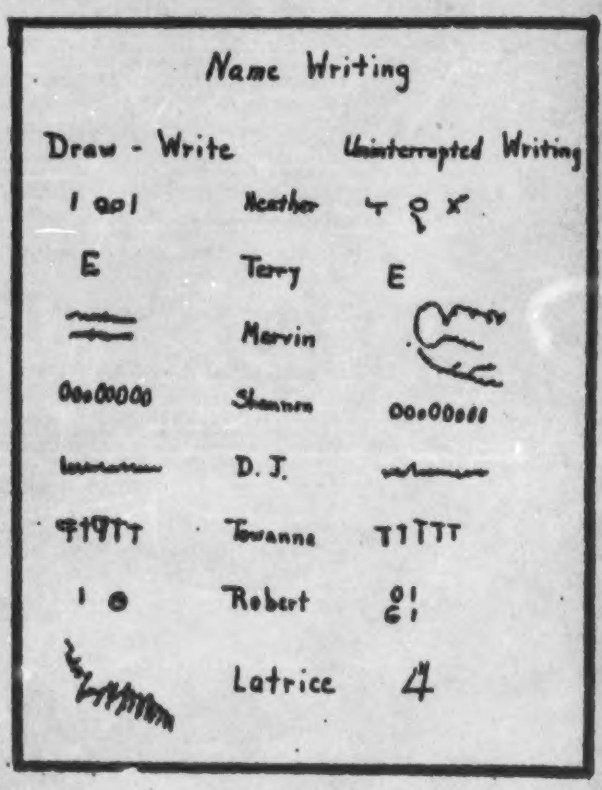
We have found that by the age of 3 all children in our study could under certain conditions distinguish art from writing.

Their decisions were, in short, systematic and organized.

* * *

We further found that all 3-year olds had a symbol or symbols for representing their name which acted as any symbol acts--serving to placehold meaning and later reconstruct that meaning from memory.

The following overhead shows the consistency of form from one writing


Name Writing
Draw - Write
Uninterrupted Writing
Heather
Terry
E
E
Mervin
Shannon
D. J.
Towanna
Robert
Latrice
4

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

to another for our 3-year olds in representing their names.

And it is important to remember that these are the writings of lower and middle class black and white children, not upper class children who supposedly have some school literacy advantage.

It is important that we recognize these writings for what they are; namely, writing, real writing!

They are not pseudo, pre-literate marks or acts, but both in form and in process the stuff of real literacy being invented from the inside-out.

* * *

In my longitudinal study of five 3-year olds, the first name was mastered using adult standards in 1 year and a half to 2 years.

But in reality it was mastered long before that, and what the 1-1/2

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

to 2 years represent is a process of fine-tuning written language with written language, a dynamic and largely unappreciated, interplay between reading and writing.

* * *

My second argument is that product is a function of the child's decision-making given a particular context of situation--nothing more or less, and that the process of decision-making is often more important than product in making decisions as to literacy.

* * *

To illustrate this argument I will use some selected examples from a story writing task which we used in our research.

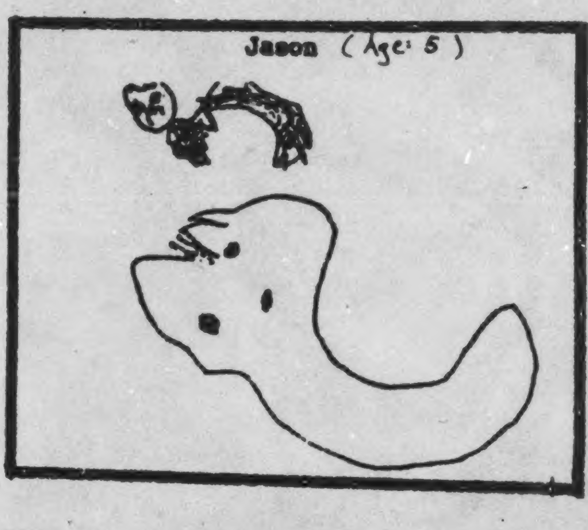
In this task the child was given a paper and pen and told, "Today, you will write a story and I'll write a story. When we are done,

5.6.1 (Continued)

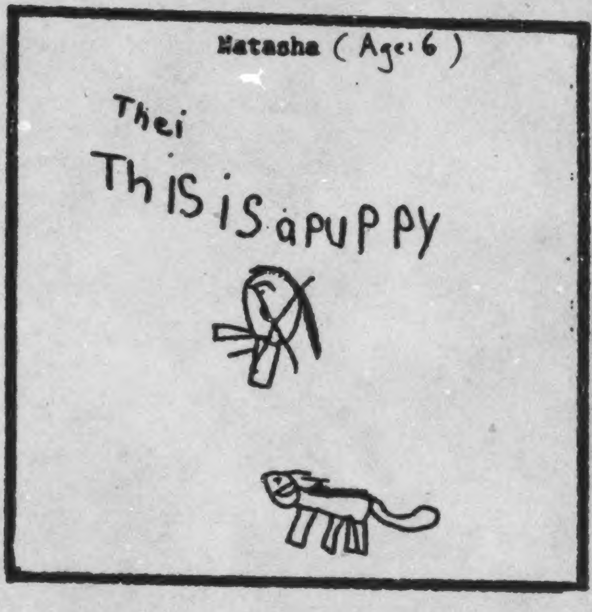
TEXT SUPPORT MATERIALS

you'll read me yours, and I'll read mine to you."

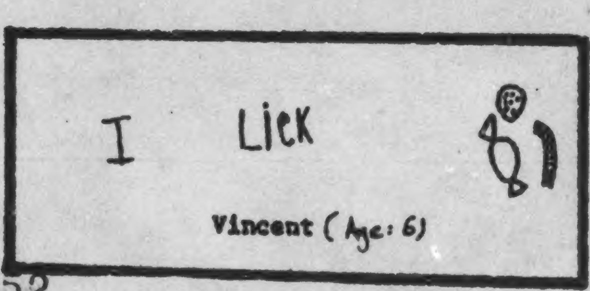
In response to this task, Jason drew a picture.



Natasha also drew a picture but not before she had written, "This is a puppy."


Natasha (Age: 6)
Thei
ThIS iS a puPPy

Vincent wrote, "I like candy," using a combination of writing and art.


I Lick
Vincent (Age: 6)

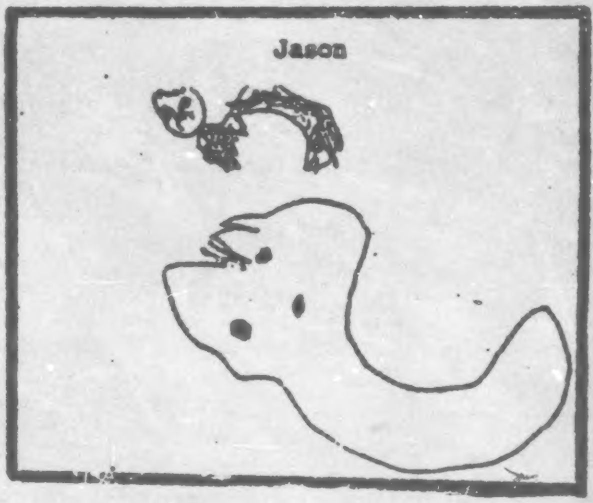
5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

If, as adults we expected the child to write when we asked him to write then we would be most pleased with Natasha's work in this instance.

But to have such an expectation, I wish to argue, sells both the child and ourselves short.

Jason, when asked to read what he had written, read, "A ghost flying through the air. A dog barking. And when the ghost saw him, he came down and he bumped him on the nose!"



In so doing, Jason demonstrates that he not only understands the rules governing what he was to do in this setting, but that he understands the notion of storiness.

Jason's story shows good semantic and syntactic orchestration.

Jason, in this instance, has simply elected to move to an alternate

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

communication system to placehold his meaning.

This of course is an option which we, too, as literate adults can make when writing.

Any literacy decision which we wish to make about Jason and the product he produced must bear this fact clearly in mind.

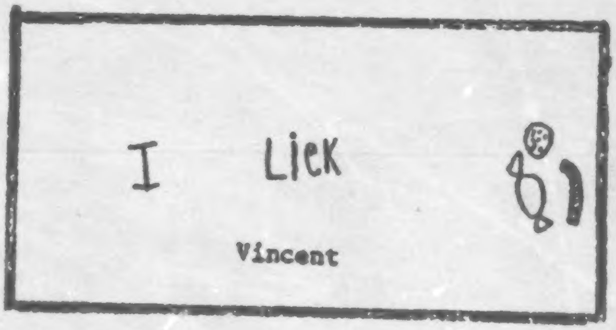
Vincent, age 6, when asked to read what he had written, read the expected, "I like candy."

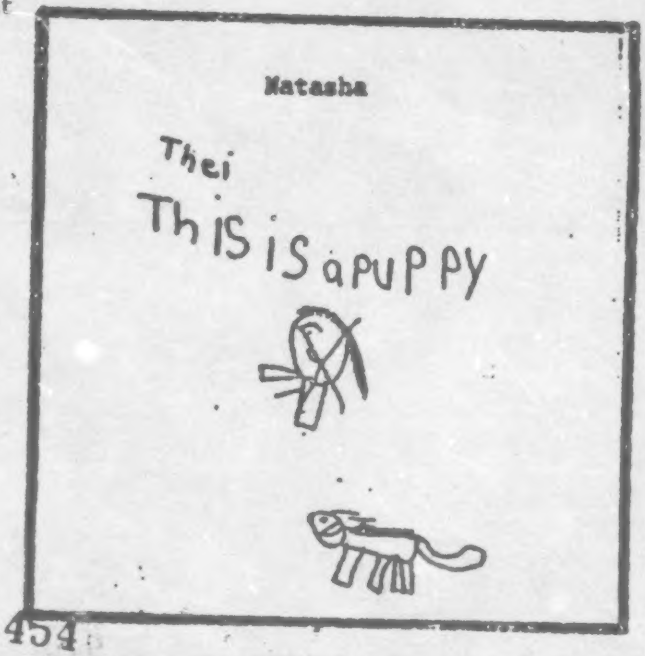
Natasha, age 6, likewise read the expected, "This is a puppy."

But it's important to understand that each child has communicated ideas in sentence form using graphics as symbols to placehold meaning.

Vincent, like Jason, negotiated his writing to drawing when he believed he couldn't spell candy.

But it is also important to understand that neither Vincent nor





5.6.1 (Continued)

TEXT	SUPPORT MATERIALS
Natasha showed knowledge of storiness, whereas Jason did!!	
So from one perspective the products which we might initially favor don't look so good.	
Now we really don't know if Vincent or Natasha have a notion of storiness from this single written event.	
All we know is that in this situation they decided to respond in this particular way and that their way of responding differed from other children, namely, Jason.	
* * *	
Trying to get ideas down on paper can be a constraining factor, especially if schools demand correctness of form.	
My hunch is that both Natasha and Vincent decided to play it safe.	

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

So product is not all that I know, but rather a function of decision-making given a particular context of situation.

* * *

Golomb, in studying children's art, supports this thesis (Golomb, 1979).

Children represented man in different ways depending on medium and task.

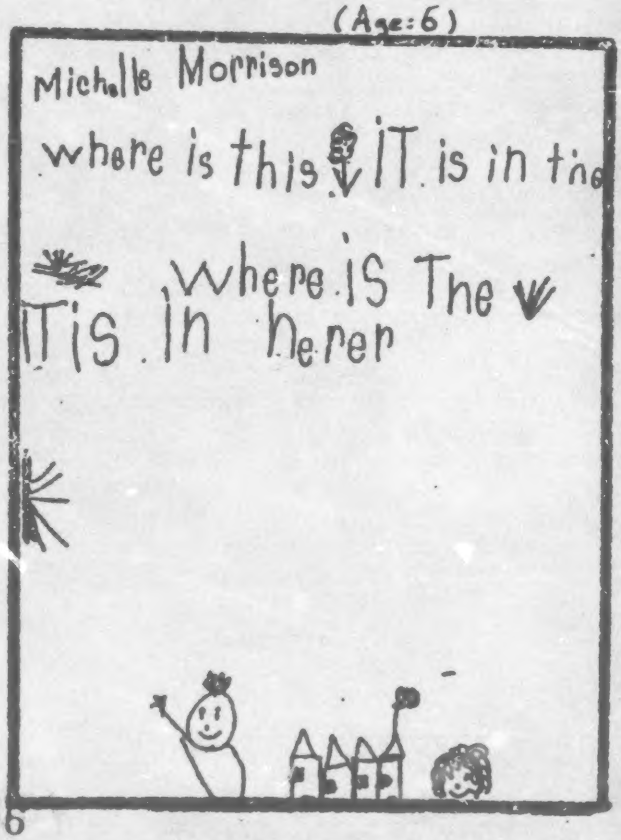
* * *

My third argument is that writing is not a monolithic skill; different tasks elicit different language processes and provide new opportunities to test current language hypotheses.

Michelle, in Session 7, was asked to write her name and anything else she could write.

Here is her masterpiece. Let's examine the process she went through.

(Age:6)



Michelle Morrison

where is this IT. is in the

where.IS The

ITis . In herer

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

After writing, 'Where', she asked,
"Did I write 'where'?"

The researcher responded, "Yes."

"I forgot how to write tiger."

The researcher responded, "You write whatever you can."

Michelle replies, "It begins with 'T'," writing 't'.

She adds, "I want to know how."

The researcher responds, "You write whatever you want to write."

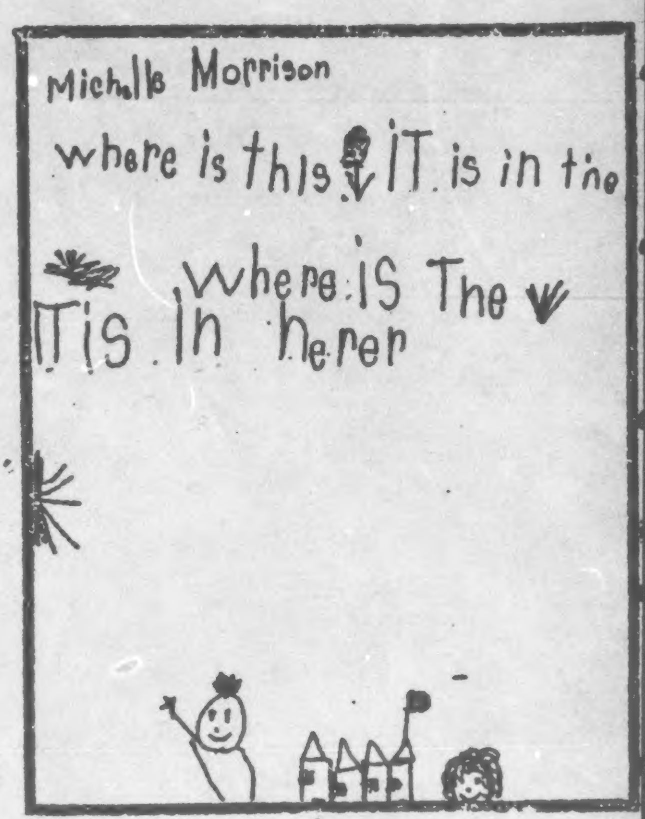
Michelle says, "I don't know how. Is a 'h' after this (pointing to the 't')?"

Michelle writes 'is', squeezing it in between the 'e' in where and the 't' in this.

Michelle starts to leave the table saying, "I'll be right back."

(She has a word card with tiger written on it.)

The researcher stops her saying, "You write it how you think it is."



Michelle Morrison
where is this IT. is in the
where IS The
IT iS. In herer

5.6.1 (Continued)

TEXT

"I wish you'd tell me some words. I can't remember tiger."

"You do the best you can. You'll remember it's tiger."

Michelle responds, "I don't know what to write. Can I write a picture? . . . Can I write a picture, if I don't know how to spell it?"

"You write whatever you like to write."

Michelle writes, 'This', and draws a flower.

She then writes, 'It is in'.

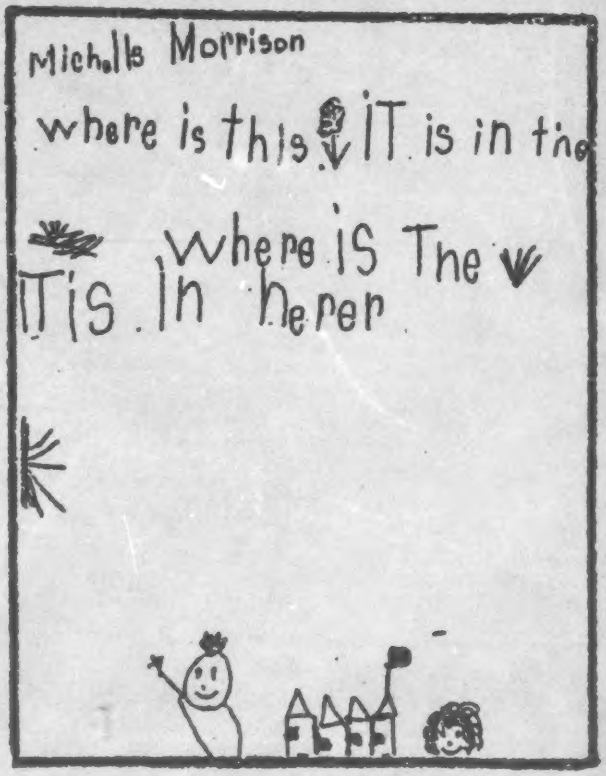
She reads to herself, "Where is this flower. It is in."

She writes 'the', and draws some grass.

Again she reads the whole thing: "Where is this flower. It is in the grass."

She writes her second 'Where' at this point, rereads, writes 'is the', and then draws another clump of grass.

SUPPORT MATERIALS



Michelle Morrison

where is this IT is in the

Where iS The

ITiS In herer

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

Without rereading she writes, 'It is', saying the words to herself as she does so.

After reading all she wrote, Michelle writes, 'in herer'.

She then reads her completed text:

"Where is this flower?
It is in the grass.
Where is the grass?
It is in here."

* * *

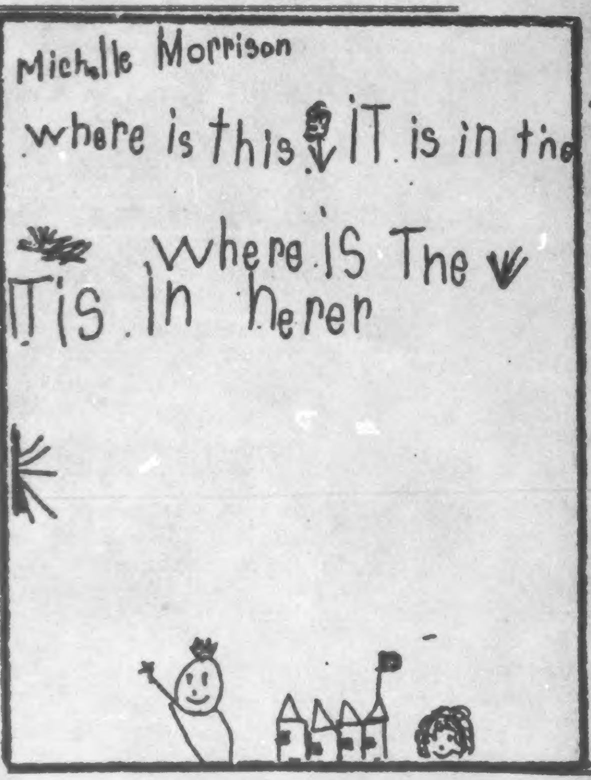
Throughout this event we can see Michelle clarifying for herself what the expectations were for her writing under this condition.

She wanted approval to get her word card so she could spell correctly and later to draw instead of write.

* * *

Clearly by listening to Michelle we get a good picture of what constraints she sees as operating in this setting.

* * *



Michelle Morrison
where is this . IT . is in the
where . IS The
IT is . In herer

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

It is important to understand, however, that this important literacy event would have been lost if we had examined only product and not process.

* * *

By watching Michelle write, however, this product which in itself means little, illuminates the orchestrated literacy decision-making event which undergirds it.

* * *

Processes and constraints which are frozen when we observe adult writing, once again become visible.

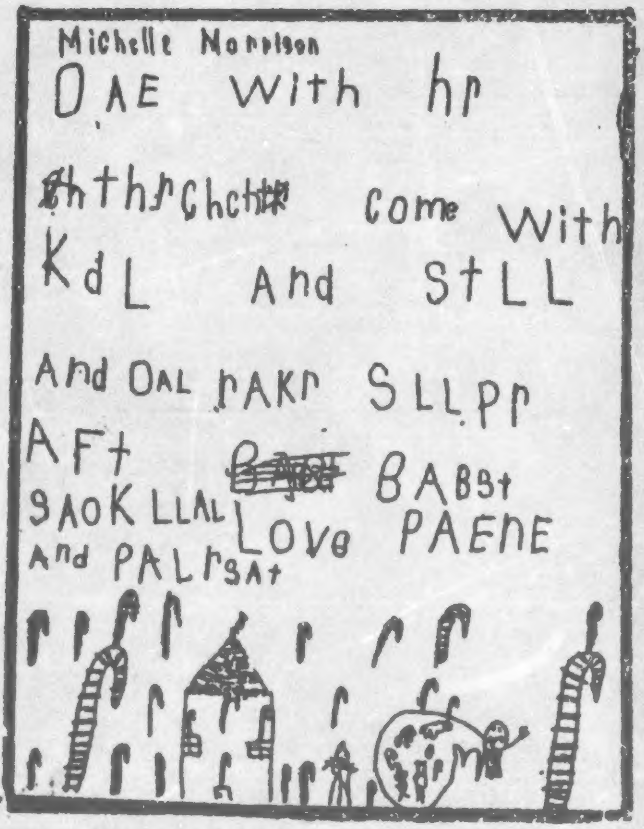
* * *

In another task, Michelle was asked to write a letter to Santa.

* * *

Michelle wrote 'DAE' and asks, "Does it spell dolly?"

The researcher responded, "You write it the best you can."



Michelle Norrison
DAE with hr
Chthrchcht come with
KdL And StLL
And OAL rAKr SLLpr
AFt [illegible] BABBt
SAOK LLAL Love PAEnE
And PALrSAt

5.6.1 (Continued)

TEXT

After writing 'with', Michelle reads, "Dolly with," and then writes 'hr'.

At this point Michelle asks, "Does this spell her?"

The researcher responds, "You're doing nicely writing this letter."

Michelle sounds out 'Tr' and 'Ch'.

She writes 'ch' and crosses it out, saying, "Oh, is that right for treasure?"

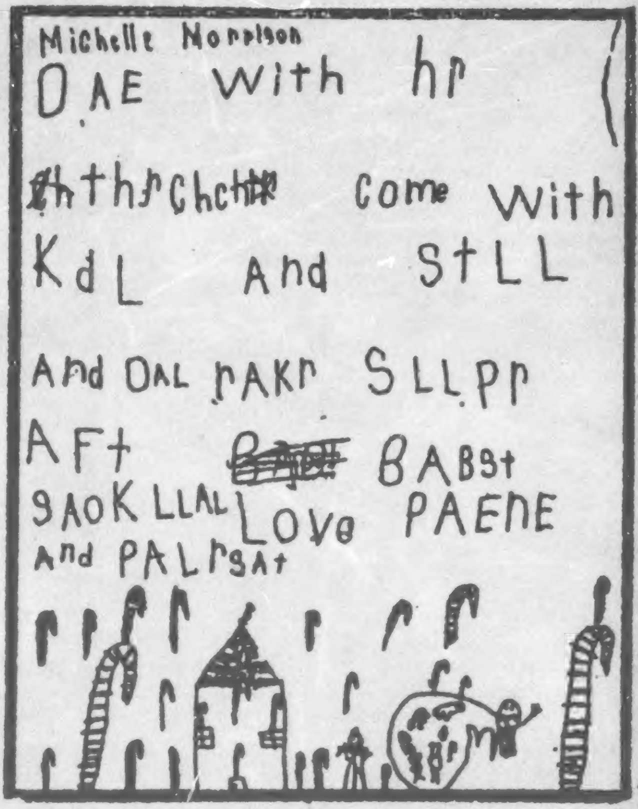
The researcher says, "If you make a mistake you can cross it out."

Michelle writes 'thr chchrt', and decides to cross out the final 'tr', as she asks, "Does that say Treasure Chest?"

The researcher responds, "You're doing well. You keep writing your letter."

After rereading, Michelle says, "I know how to spell come."

SUPPORT MATERIALS



Michelle Norrison
DAE with hr
~~ch~~thrchch~~rt~~ come with
KdL And StLL
And OAL rAKr SLLpr
AFt ~~[illegible]~~ BABst
SAOKLLAL Love PAENE
And PALrSAt

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

Michelle reflects as much to herself as to the researcher, "You make funny 'e's."

As she makes one she says, "You make little circles and color it in."

Michelle writes 'come with', and once more rereads her evolving text.

Michelle asks, "Does cradle start with 'K' or 'C'?"

Michelle writes 'KdL', asking, "Does that say cradle?"

After writing 'And', Michelle once more rereads her text.

She writes 'stLL' and asks, "Does that spell stroller?"

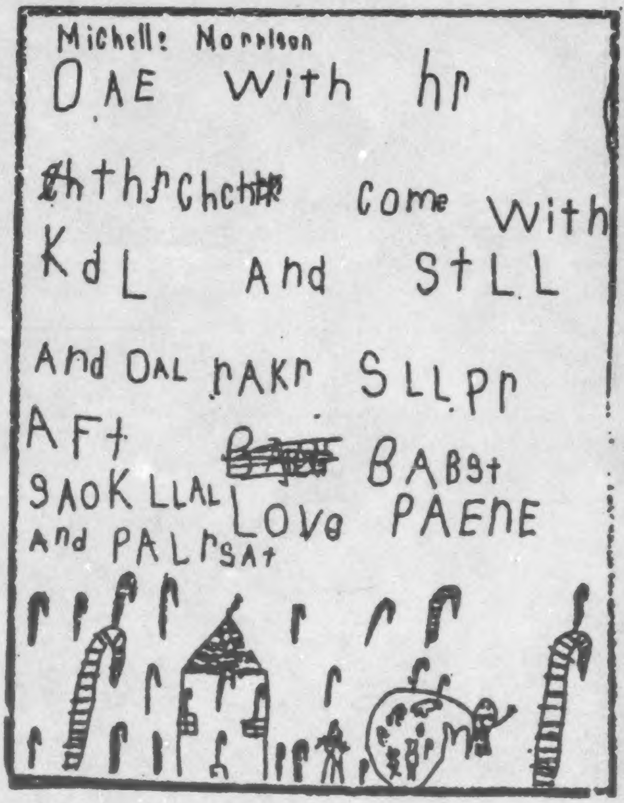
The researcher gives no comment.

Michelle writes 'And DAL rAK'.

She reads "rocker" adding a final 'r' to her current r-A-K.

After reflecting, "I squeezed in dolly," Michelle once again reads her text.

She writes 'sLLpr', asking "Does that say sleeper?"



Michelle Morrison
DAE with hr
~~th~~thrChch come with
KdL And StLL
And DAL rAKr SLLpr
AFt BABst
SAOK LLAL Love PAENE
And PALrsAt

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

Michelle says, "Let me see that catalogue?"

The researcher says, "Just write your letter from what you can remember. You've done such a nice letter."

Michelle writes 'B-A-O-T' reflecting, "I don't think Santa could read it," as she crosses it out.

She rewrites baby seat spelling it B-A-B-S-t as she pronounces it.

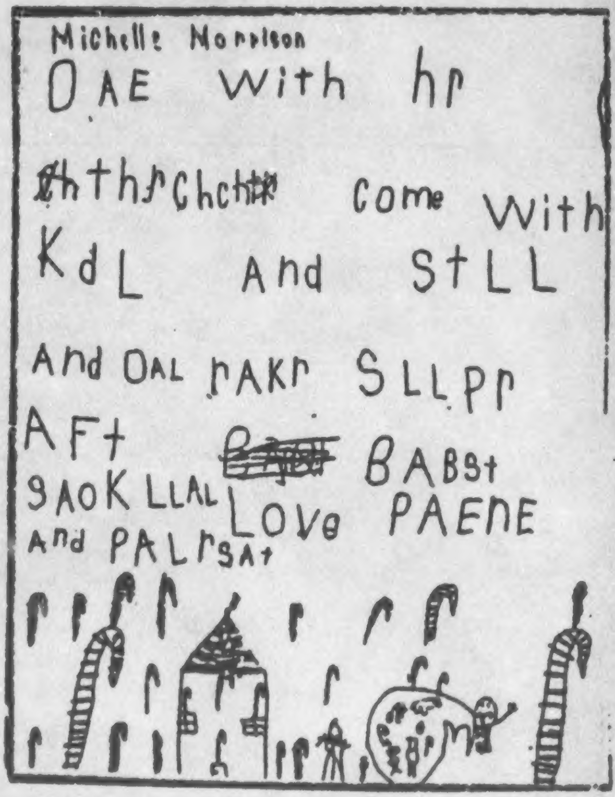
Michelle says "socks." She writes 'sAOk'.

She writes 'Love PAENE', and asks, "Does that say panties?'

Michelle looks at this a moment and then squeezes in 'LLAL' to complete her current thought: "Little Love Panties."

Michelle wonders, "Now, what else did she come with?"

She mutters, "Powder set," and writes 'And PALrSAt', after asking "How do you spell powder?"



Michelle Norrison
OAE with hr
hthrChch come with
KdL And StLL
And OAL rAKr SLLpr
AFt BABSt
SAOK LLAL Love PAENE
And PALrSAt

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

Michelle again asks, "Let me see the catalogue."

This request is cut short by the researcher saying, "Let's finish your letter."

Michelle asks, "Should I use periods?", but decides against it.

Then Michelle says, "I forgot to put my name."

After Michelle writes her name at the top of the paper she, still not tired of the task, elects to draw a picture.

* * *

This example shows us much:

Michelle not only freely moves between art and writing to placehold meaning, but in so doing she shows us what a sophisticated language user she is.

Michelle demonstrates good graphophonemic knowledge.

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

As a writer, she shows us how actively engaged she is in the reading process.

As a writer, Michelle is the first reader she encounters (Atwell, 1980).

And over and over again she demonstrates that it is important to her to know that she is communicating as a writer to a reader.

* * *

After writing the letter, Michelle asked me not to send it to Santa: "Don't send it to Santa. I know it's not correct."

How unfortunate that Michelle had this moment of doubt.

* * *

In this instance Michelle seems all too willing to adopt the adult expectation of product being the important indicator of what "I know."

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS
This adult focus on product in the environment in which Michelle is growing up begins to not only confuse Michelle in terms of what writing is, but is also beginning to get Michelle to reorder her priorities.	
Michelle, at this point, seems aware, however, of the differences between this writing situation and others she encounters in terms of accepting what she does.	
In this setting, Michelle has learned that one is allowed to be freer, to experiment, to take risks, and to actively utilize all that one knows about language.	
And this is important! Here, Michelle teaches us that external rewards are not necessary.	
All that is necessary is that we be supportive and accepting of the child's attempts at using language	

5.6.1 (Continued)

TEXT	SUPPORT MATERIALS

in the process of learning language.

* * *

With a focus on product, we fail not only to see growth, but also to make and take the opportunities for literacy which abound.

With a focus on product, we deny language users, such as Michelle, their most powerful language learning strategy; namely, active involvement--the kind of involvement which demands their bringing to bear all they currently know about language to test yet another new hypothesis.

* * *

It is only when children are engaged in this way that both they and we can get about the business of understanding written language literacy.

* * *

5.6.1 (Continued)

TEXT SUPPORT MATERIALS

Written language literacy is not a product; it is a process.

* * *

As such, it should not surprise us that it is as a process that we, too, have the best hope for our own growth.

* * *

I began this presentation with a language story telling of how a teacher rejected a sign-in activity.

I now wish to return there, and make one simple request: "Sign-In Please!"

5.6.2 ON CONFUSING GROWTH WITH EXPERIENCE

by
Carolyn L. Burke
Indiana University

*Speech given at the Annual Meeting of the National Council of Teachers of English Convention, Cincinnati, November 23, 1980.

TEXT	SUPPORT

Let's get started by considering the accuracy of the following statements:

- Most 5-year olds can correctly identify the basic colors.
- Most 6-year olds can write their names.
- Most 7-year olds have a reading sight vocabulary of approximately 215 words.

Despite the fact that we seem to have no trouble responding to such statements and despite the fact that such statements are capable of statistical verification (that is, we can test populations and come up with numerical counts and percentages); such statements, we would like to argue, are not useful predictors of accomplishment.

The relationship which these statements feature, one between age and accomplishment, is based upon a loose correlation between age and experience.

The languaging of the children in our study demonstrates that experience

5.6.2 (Continued)

TEXT	SUPPORT
is the operational factor of this pair.	
Therefore, it is consideration for experience which will lend predictability to the language assessment of any individual.	
This argument becomes clearer when a fourth statement is added:	- Most adults can read.
While this statement is equally as verifiable as the first three, some of the pitfalls in the underlying reasoning are more easily visible.	
What does this "fact" lend to our assessment of any individual adult who does not demonstrate an ability to read?	
We cannot assume lack of age.	
But we may begin to ask questions about opportunities and experience.	
Age pales into insignificance in the adult example.	

5.6.2 (Continued)

TEXT	SUPPORT MATERIALS

And it should begin to pale when the language users we are interested in are children.

Age has always been a convenience.

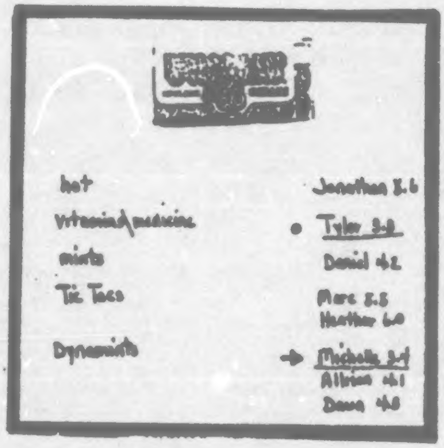
An easier factor for language researchers and curriculum developers to manage than is experience.

But it is dangerous precisely because it does not consistently co-vary with the operational factor of experience.

Let's look at some responses which children gave when reading items common in their environment.

The responses have been ordered in relationship to their approach to the conventional response. The trend is from a functional response to the item, through categorical, to specified.

When we examine the ages of the children who made these responses no clear age trends can be seen.



hot	Jonathan 5.6
vitamins/medicine	● Tyler 3-8
mints	Daniel 4.2
Tic Tacs	Marc 5.5 Heather 6.0
Dynamints	→ Michelle 3-4 Allison 4.1 Dawn 4.8

5.6.2 (Continued)

TEXT	SUPPORT MATERIALS

Let's pay particular attention to Tyler and Michelle, the two youngest readers, as we look at three additional sets of environmental print readings.

1. In this instance we again find responses which range from functional, through categorical, to specified; and with a dispersal of ages.

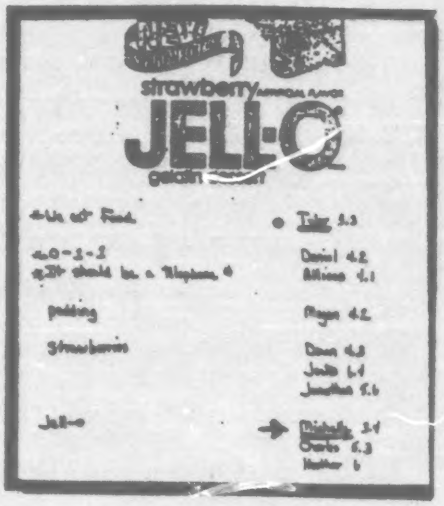
Just as with Dynamints, Michelle seems to have the experiential edge of Tyler.

Examination of the functional responses to this print environment is rewarding to our age thesis.

Both "we eat food" and "it should be a telephone number" are descriptors of selected past encounters which the reader feels should be relative to this encounter.

Tyler is saying, "Hey, you're suppose to eat this."

1.


strawberry
JELL-O
gelatin dessert
We eat Food
Tyler 3.3
It should be a Telephone #
Daniel 4.2
pudding
Megan 4.2
Strawberries
Jonathan 5.6
Jell-o
Michelle 3.4
Heather 6

5.6.2 (Continued)

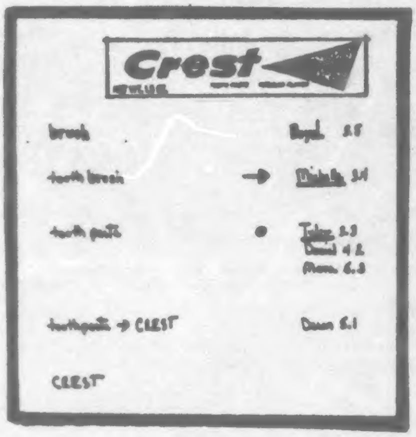
TEXT	SUPPORT MATERIALS

Daniel and Alison are saying, "This is crazy, they made the name look like a phone number."

All three of their readings are the direct outcomes of their personal functional knowledge of the world.

2. Here is an instance where Tyler seems to have a slight experiential edge on Michelle--Michelle's response being functional, while Tyler's is categorical.

2.


Crest
brush
Boyd 2.8
tooth brush →
Michelle 3.4
tooth paste ●
Tyler 3.3
David 4.2
Mom 6.3
toothpaste → CREST
Dawn 5.1
CREST

In reading this product he is not in danger of being considered immature (all those studies which say that the boys developmentally lag behind girls), as he was with his readings of Dynamints and Jell-O.

Now let's see if we can even the odds even more.

Not only between Tyler and Michelle but between them and some of their older research mates.

5.6.2 (Continued)

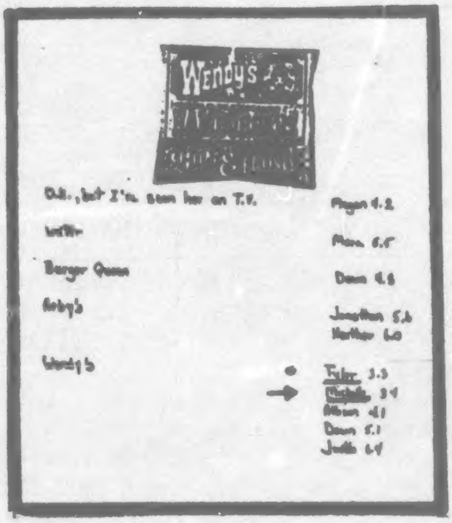
TEXT SUPPORT MATERIALS

What happens when the children are asked to read an item which is brand new?

Where the experiential opportunities are severely restricted for everyone?

3. An item which was only physically available in the environment for about a month and for which television ads had been available for about a week before the readings.

3.


Wendy's
D.K., but I've seen her on T.V.
Megan 4.2
Burger Queen
Mara 5.5
Dawn 4.8
Arby's
Jonathan 5.6
Heather 6.0
Wendy's
Tyler 3.3
Michelle 3.4
Allison 4.1
Dawn 5.1
Justin 6.4

Look how successful Tyler and Michelle are at competing under these circumstances.

And look at just how dispersed the age ranks are in this condition.

Now, before we acquiesce to the danger of concluding that there might be a simple and direct relationship between an increase in experience and the production of a specified conventional response, we need to consider the

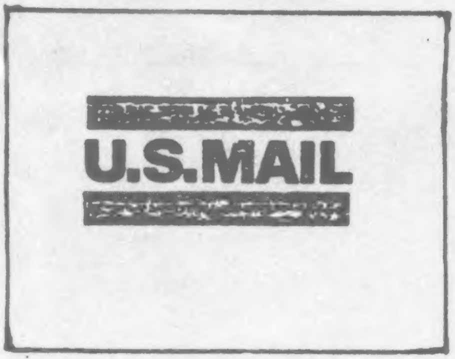
5.6.2 (Continued)

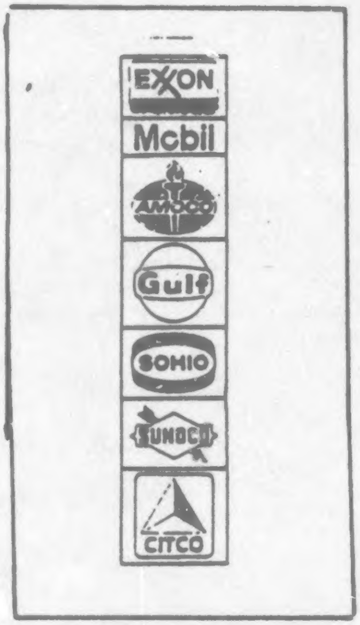
TEXT	SUPPORT MATERIALS

reading which several of our language users gave to this graphic.

4. They read both gas and gas station. The fact that several of them concurred in their reading assured us that they shared a focus on a common experiential background which we (older and wiser, as all researchers are) were unable to spot. We were forced to go out and reexperience gas stations, actively confront them as our subjects obviously were, instead of simply encountering them as we had been wont to do, in order to perceive the significance of their outline configuration, limited text, style of lettering, geometric logo designs, and predominance of red, white and blue coloring. It was enough to make us think that we should be able to "fill up" at the post office.

4.





5.6.2 (Continued)

TEXT SUPPORT MATERIALS

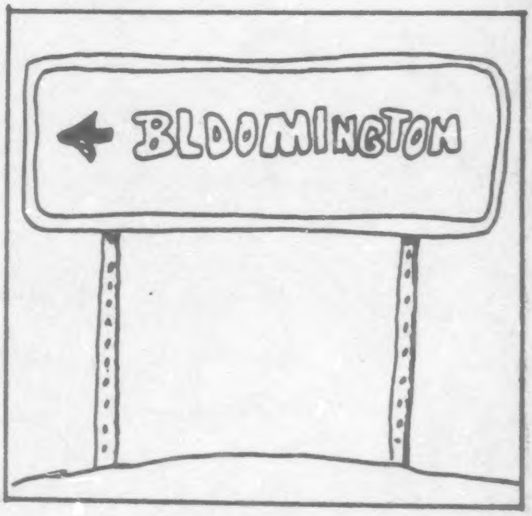
While the researcher's experience of both the U.S. Mail insignia and gas stations was of longer duration than that of our subjects their experiences were presently more acute.

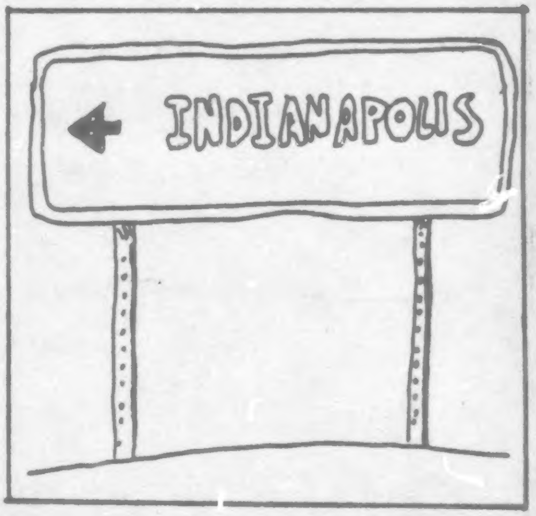
The currency, strength and commonality of their confrontations led them to an agreed upon alternative response.

We encountered another mystery when our Bloomington and Indianapolis subjects were each asked to read a highway sign displaying the name of their town.

Some children in both cities gave a reading of "book."

While phonic analysis might seem to offer some explanation for the Bloomington sign, it loses all its promise in relationship to the Indianapolis sign.



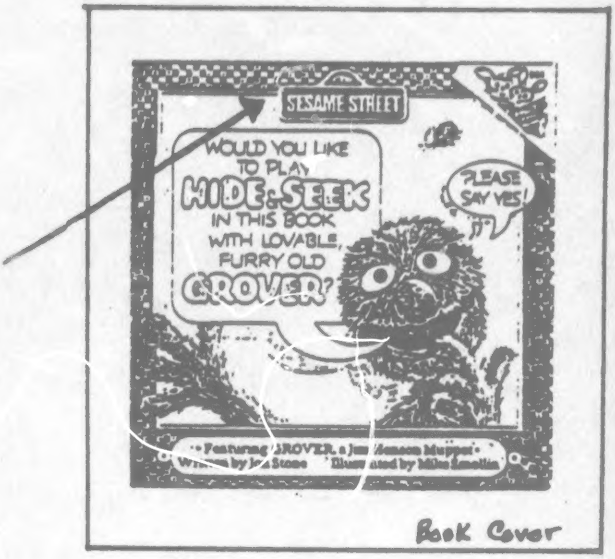


5.6.2 (Continued)

TEXT SUPPORT MATERIALS

In this instance, it was left to one of the subjects to cope with the experiential void of the researchers.

This young person pointed out, by giving a reading of Sesame Street to the Indianapolis sign, that a number of our subjects were possessed of an experience which we simply lacked.


SESAME STREET
WOULD YOU LIKE TO PLAY HIDE & SEEK IN THIS BOOK WITH LOVABLE, FURRY OLD GROVER?
"PLEASE SAY YES!"
• Featuring GROVER, a Jim Henson Muppet •
Written by Jon Stone
Illustrated by Mike Smollin

Book Cover

In this instance, the researcher's age worked as a clear obstacle to experience.

Our subjects tended to display a greater facility to produce adult conventional responses in their readings of environmental print than they did for either their own written stories or for a published picture story book.

It is quite easy to draw the assumption from these data that the two continuous texts are more complex

5.6.2 (Continued)

TEXT	SUPPORT MATERIALS
than is the environmental text and therefore simply more difficult to read; an assumption which does not hold up so well under continued ex[illegible]nation.	
As the U.S. Mail example has already indicated, even the most spartan of environmental print settings are replete with graphics from alternate communication and signaling systems: container shape, logos, color relationships, pictures and print.	
These present a complex communication processing environment.	
Cues must be selectively perceived from the varying systems and a weighting of their relative influence made as they transact with the total of incoming cues and with the reader's experiential knowledge.	

5.6.2 (Continued)

TEXT	SUPPORT MATERIALS

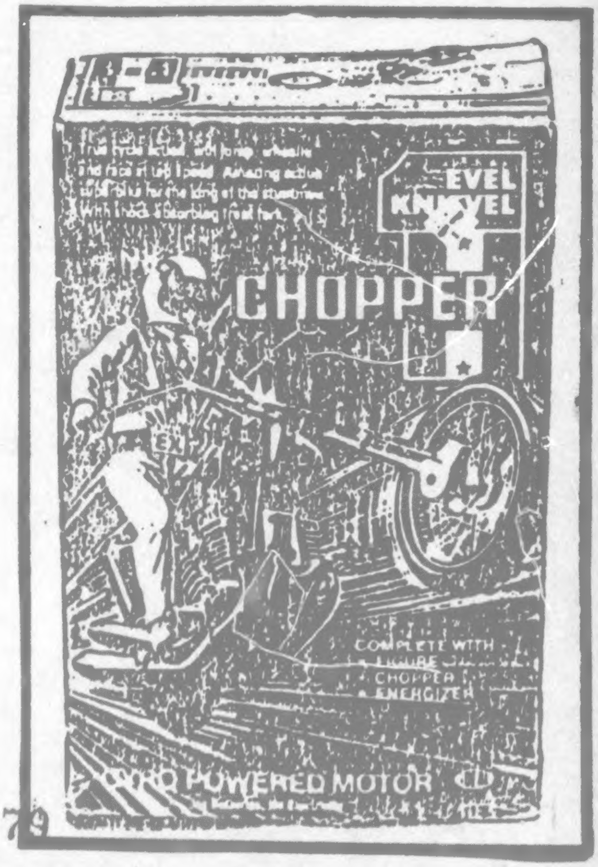
Even when the examination is focused on print environment alone, the linguistic complexities are greater and the subject's responses more unique than common sense views of environmental print would predict.

U.S. Mail turned out to be the most lexically constrained text environment with which our readers were confronted.

And even it was composed of something more extended than a single word.

The other text environments were much more complex--contained multiple syntactic and semantic units scattered over the item's surface.

Presenting messages which included brand name, generic category, ingredients, amounts, and directions for use.


EVEL KNIEVEL
CHOPPER
COMPLETE WITH FIGURE CHOPPER ENERGIZER
CORD POWERED MOTOR

5.6.2 (Continued)

TEXT SUPPORT MATERIALS

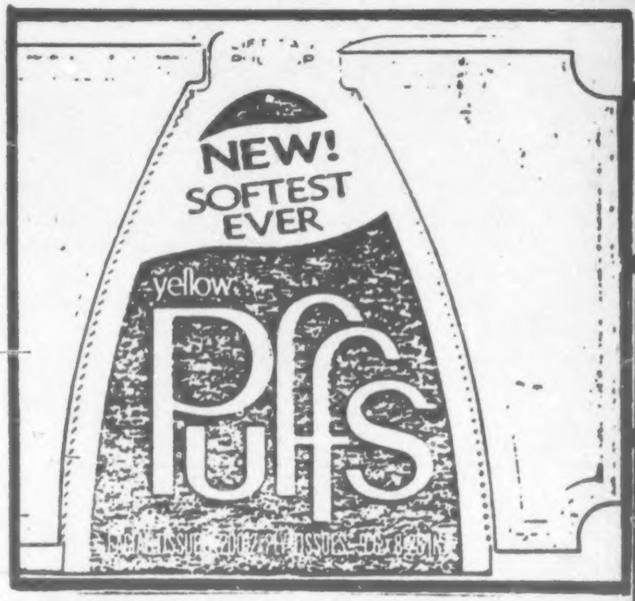
All these messages weighted as to significance by their placement on the package, as well as the size, shape and coloring of their letterings.

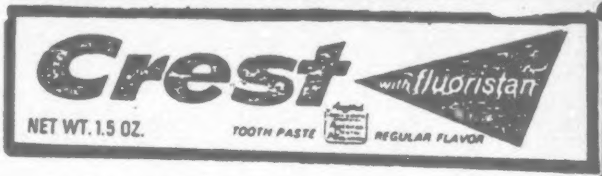
Through this virtual forest of competing cues and messages, our subjects moved with credible composure, familiarity and with a display of individual interest.

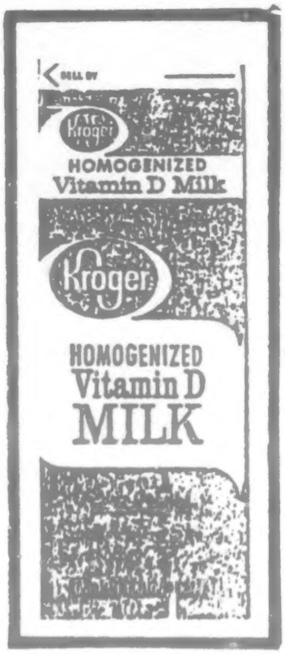
So that while the majority of readers might choose to read "Puffs," "Kleenex" or "Tissues" in this environment, at least some individuals read "Yellow."

"Crest" and "Toothpaste" won the popularity contest in this instance, but two discerning readers focused on "fluoristan."

And while "Milk" and "Kroger's" captured most attention, there was a small discerning group who attended to "Homogenized."


NEW!
SOFTEST
EVER
yellow
Puffs


Crest
with fluoristan
NET WT. 1.5 OZ.
TOOTH PASTE
REGULAR FLAVOR


Kroger
HOMOGENIZED
Vitamin D Milk
Kroger
HOMOGENIZED
Vitamin D
MILK

5.6.2 (Continued)

TEXT	SUPPORT MATERIALS
These young language users displayed the flexibility and confidence necessary to make individual decisions which can only come with the accumulating effect of personally significant experimental confrontations.	
Environmental print confrontations which were initiated from the day their mother pulled their first diaper out of the Pamper's box, continued through the well marked jars of Gerber's Baby Food, right up to the first historic encounters with the Golden Arches of McDonald's.	
So, if they read boxes more conventionally than they read books, it just might be that it is not because environmental print is less complex than continuous text, but because it is more familiar.	

5.6.2 (Continued)

TEXT	SUPPORT MATERIALS

An interesting extension of this perspective is found in the children's writing.

DeShonna produced this masterpiece when she was asked to write anything that she could write.

Having produced it, she then read it, "This says pumpkin, this says Christmas Tree, this says DeShonna."

What did this effort tell us of DeShonna's discernment between art and language?

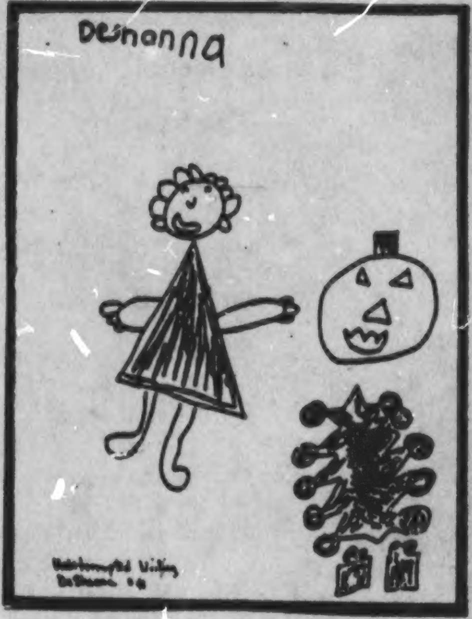
Or, of her control of the conventions of written language?

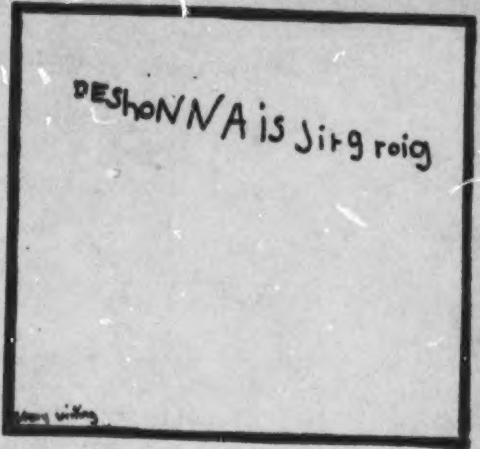
Not much!

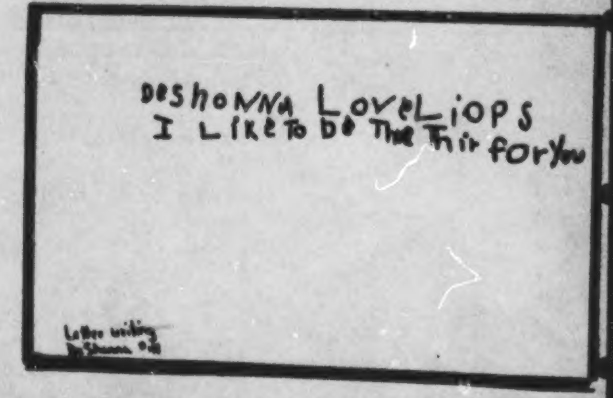
Not much, until she also produced this story: "DeShonna is jumping rope."

And this letter: "DeShonna loves Linda. I like to do the things for you."

DeShonna does distinguish art from language.


DeShonna
Undetermined writing
DeShonna


DEShoNNA is Jirg roig
Story writing


DeShoNNA LoveLiops
I LIKE To Do The Thir forYou
Letter writing
DeShonna

5.6.2 (Continued)

TEXT SUPPORT MATERIALS

She is aware of, and a user of written language conventions.

But she varies her application of these strategies as do all effective language users, depending on her familiarity with the particular language mode in use and her notion of the formality of the circumstances.

* * *

Why can most 5-year olds identify colors, and most 6-year olds write their names?

Because they live in environments which provide many meaningful and pleasant encounters with such processes.

* * *

What is one of the most valuable gifts we can give a language user?

* * *

5.6.2 (Continued)

TEXT	SUPPORT MATERIALS
We can litter their environment with enticing language opportunities and guarantee them the freedoms to experiment in them.	

* * *

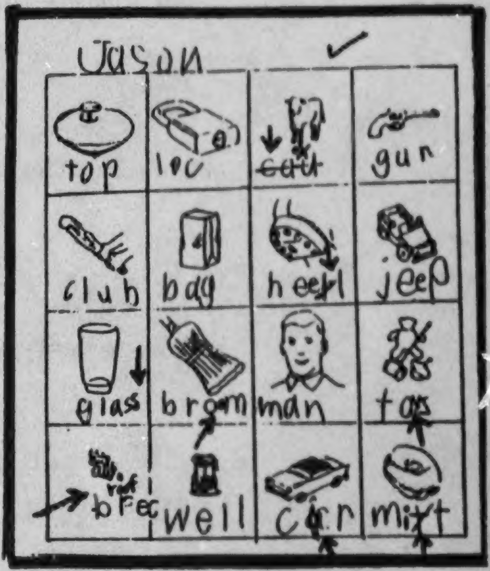
5.6.3 ON CONFUSING CONVENTION WITH LANGUAGE

by
Jerome C. Harste
Indiana University

*Speech given at the Annual Meeting of the National Council of Teachers of English Convention, Cincinnati, November 23, 1980.

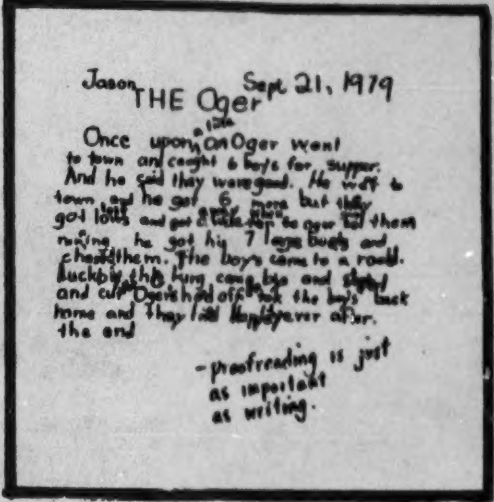
TEXT | SUPPORT MATERIALS

In first grade, Jason's teacher corrected his spelling of heel, glass, broom, toys, car and mitt. She also corrected any faulty notions which Jason might have developed about the practicality of authors who put together reading workbooks; notice particularly the teacher's correction of Jason's "cau" to "ox."



* * *

In third grade, Jason's teacher corrected everything she knew how to correct including his sentence structure and spelling; the latter on almost everything except 'ogre', a word she obviously didn't know how to spell either.



Jason THE Oger Sept. 21, 1979

Once upon a time an Oger went to town and caught 6 boys for supper. And he said they were good. He went to town and he got 6 more but they got loose and got [illegible] the oger [illegible] them running he got his 7 league boots and chased them. The boys came to a road. luckily the king came by and stopped and cut Oger's head off took the boys back home and they lived happily ever after. the end

-proofreading is just as important as writing.

* * *

From an instructional perspective what all these experiences have in

5.6.3 (Continued)

TEXT	SUPPORT MATERIALS
common is a concern for convention.	
This concern pervades written language instruction.	
It guides teachers in making decisions which range from "good handwriting" to "correct spelling" to "good grammar" to the "well-formedness of stories."	
Language conventions are defined as socially agreed upon rules of expression which have as their function the facilitation of communication.	
Notice there is nothing in this definition which defines them as barriers to communication.	
They are not the pearly gates, entrance through which leads to a life of linguistic bliss.	
We can communicate -- and do so quite creatively--whether or not our speech or writing is conventional.	

5.6.3 (Continued)

TEXT	SUPPORT MATERIALS
Conventional control does not free creativity; when over-emphasized, it has quite the opposite effect.	
James Joyce broke the canons of convention with his stream of consciousness writing and in so doing taught us a process by which to mean.	
So have Dawn, Najeeba, Ofer, Charvin, and Mike, all age 4, as you will see shortly.	
* * *	
Despite attempts to whip students into shape so that they can spell like Webster, pen like Palmer, and organize their thoughts like Warner, I'm here today to proudly proclaim--despite everything you've heard to the contrary--there is, Good Teachers, linguistic life both before and after convention.	
The major thesis of my presentation today is that we confuse convention for language.	

5.6.3 (Continued)

TEXT	SUPPORT MATERIALS
Evidence that this is so is not only available in the comments and corrections which teachers make on student papers, but equally available when we examine the English tests and developmental taxonomies used by researchers.	
At the end of every growth and development continuum is conventional control.	
Many of the very people who so liberated our thinking about language and children and from whose thinking we too have grown, can still be criticized for confusing convention with language.	
This is as true of the work of Charles Read and Edmund Henderson in spelling as it is of Marie Clay in early writing.	
* * *	
Conventional control has been the bifocals through which we have	

5.6.3 (Continued)

TEXT	SUPPORT MATERIALS

viewed growth and development in language.

This is more than just a poor prescription for eyeglasses.

It makes it appear as if growth to convention were the goal of the oral and writing language curriculum.

It causes us to see convention when we wish to see language and in the process confuse not only ourselves but our students.

The criteria for literacy can never be convention or we have no continuum, only an on-off switch.

When convention is the lens, we fail to see linguistic growth as continuous throughout the life of the language user and in so doing fail to appreciate linguistic achievement after convention.

* * *

A case in point is Alison's signatures over a 4-year period.

5.6.3 (Continued)

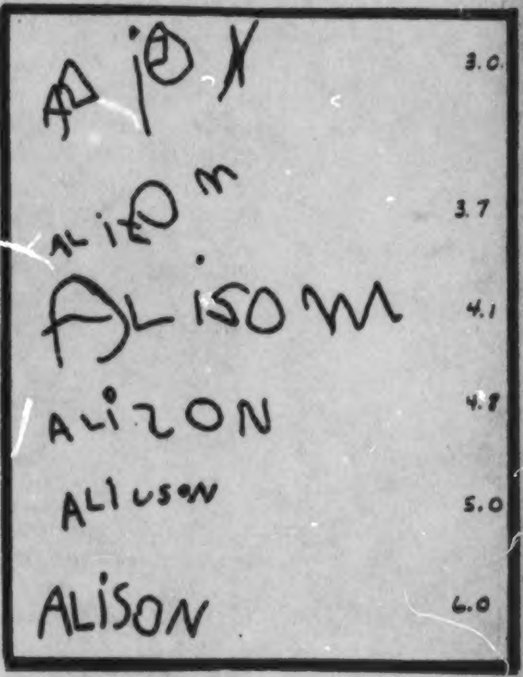
TEXT	SUPPORT MATERIALS

Alison wrote her name more or less conventionally since she was three.

Yet, her far more interesting signature is that at the age of 5.

Here everything she knew about language compelled her to put a 'u' in her name.

She experimented with this form for a couple of weeks and then elected the optional spelling her parents had chosen.

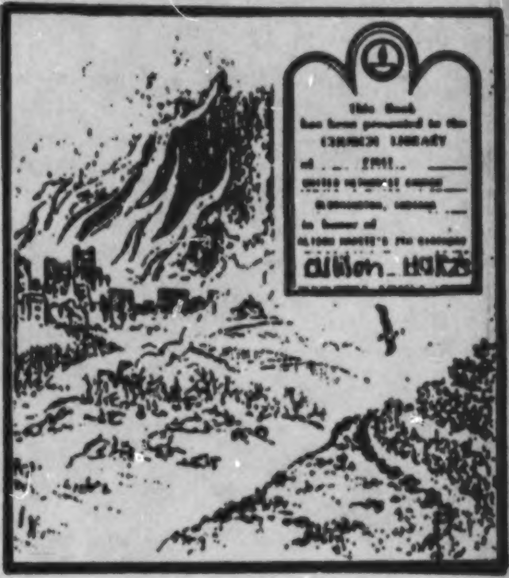

3.0
3.7
ALISOM
4.1
ALiZON
4.8
ALIUSON
5.0
ALISON
6.0

* * *

At 7, however, she produced this signature.

Since this was a fly-leaf on a book being dedicated to the church library, Alison's mother was less than ecstatic with her decision to write her name with two l's in this instance.

When asked, in exasperation, "Alison!! Why did you write two l's?" she replied, "You can, you know; some


This Book
has been presented to the
CHURCH LIBRARY
In honor of
allison

5.6.3 (Continued)

TEXT	SUPPORT MATERIALS

people write Alison that way."

* * *

Alison is an active language user; standard conventional form is the least interesting option.

* * *

It is far more interesting to map the range of hypotheses which children test relative to language than it is to assume convention the goal and non-convention either failure or carelessness.

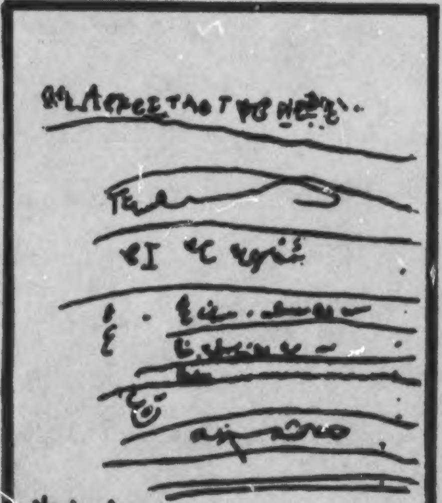
* * *

Convention and non-convention are more a function of perspective than practice.

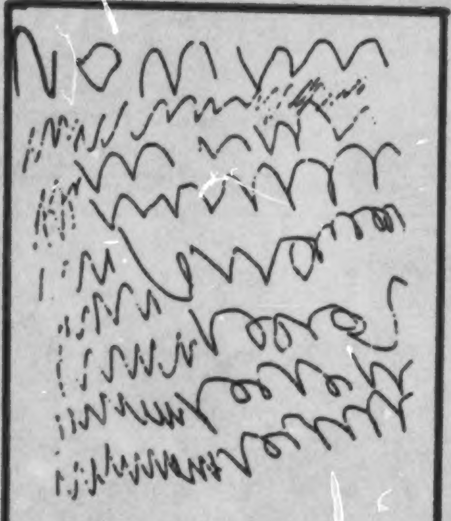
* * *

Probably no data better illustrate this point than do the cross-cultural data which we have collected.

Dawn's writing--a 4-year old from the United States--may seem



Najeeba
Saudi Arabia



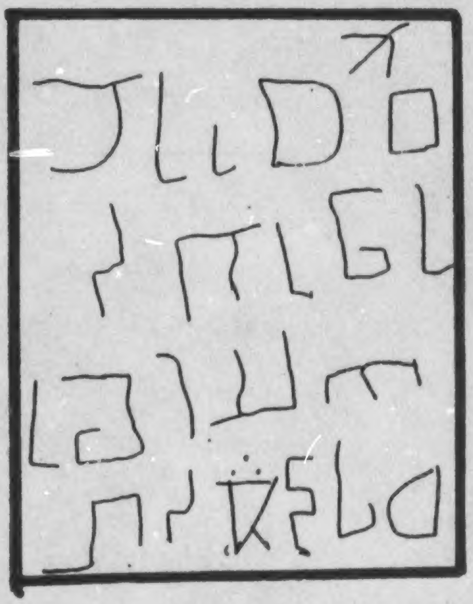
Dawn
United States

5.6.3 (Continued)

TEXT	SUPPORT MATERIALS

unconventional to us at first blush, but when one contrasts Dawn's writing to another 4-year old's writing--namely, Najeeba from Saudi Arabia--one soon realizes how English language-like it is.

Ofer's writing--a 4-year old from Israel--in contrast to Dawn's and Najeeba's writing looks decidedly like Hebrew.

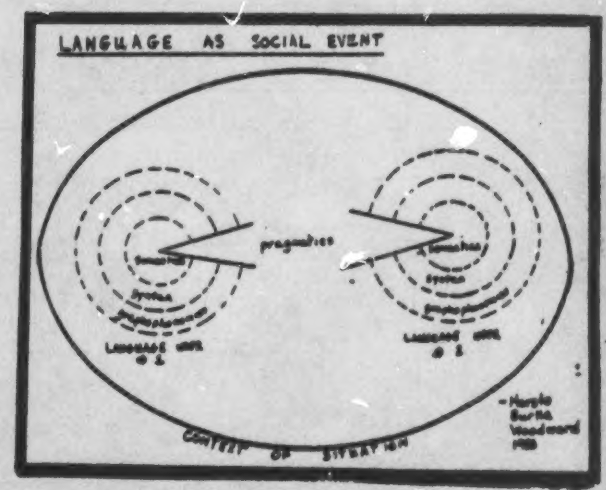


* * *

To observe that these children do not control the conventions of their language is to focus on an act, but to miss the event.

* * *

Language, whether oral or written, is a social event of some complexity.


LANGUAGE AS SOCIAL EVENT
pragmatics
semantics
syntax
graphophonemics
LANGUAGE USER #1
semantics
syntax
graphophonemics
LANGUAGE USER #2
CONTEXT OF SITUATION
-Harste
Burke
Woodward

* * *

Language did not develop because of the existence of one language

5.6.3 (Continued)

TEXT	SUPPORT MATERIALS
user, but because of two.	

* * *

If we are to understand language, we must see it as an orchestrated transaction between 2 language users which has as its intent to mean in a given context of situation.

* * *

Pragmatics is the system of language which joins language users, not only through convention but through negotiation and discretion.

* * *

This perspective is as important for our understanding of reading as it is for writing.

And I have purposefully selected a reading example to illustrate this point as convention is as big an issue in reading as in writing.

5.6.3 (Continued)

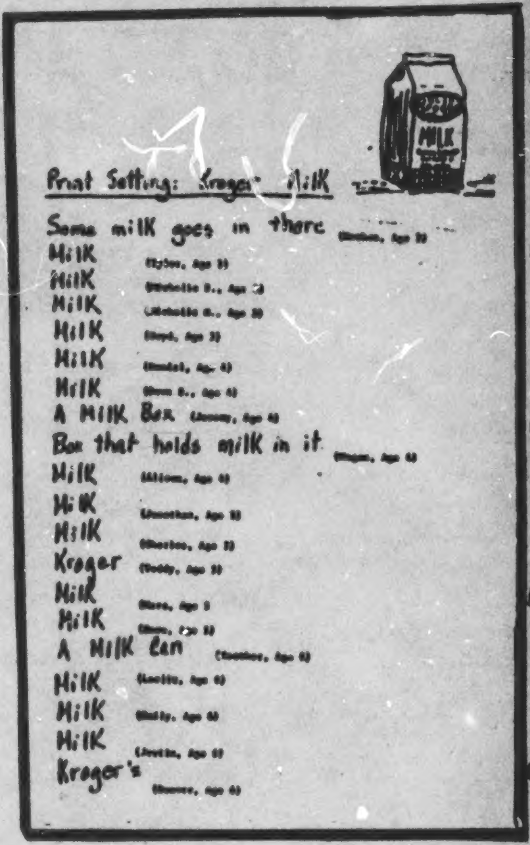
TEXT **SUPPORT MATERIALS**

When we examine the set of responses which we received after showing children a carton of Kroger's milk we can readily agree that all the "milks" and "Krogers" are responses which answer the question we asked; namely, "What does that say?"

"Some Milk goes in there," "A Milk Box," "Box that holds milk," and "A milk can," are better responses to questions such as, "What goes in there?" and "What is this?", than they appear to be answers to the What-does-this-say? question which we asked.

While clearly the children in these instances have not answered our question, what they have done is far more interesting.

They have, like us, on certain occasions, chosen to answer a question other than the one posed.



Print Setting: Kroger Milk

Some milk goes in there
Milk
Milk
Milk
Milk
Milk
Milk
A Milk Box
Box that holds milk in it
Milk
Milk
Milk
Kroger
Milk
Milk
A Milk Can
Milk
Milk
Milk
Kroger's

5.6.3 (Continued)

TEXT	SUPPORT MATERIALS

We do this all the time. (It's a classic strategy used in passing doctoral exams.)

The children here, like us, have exercised their options.

That is, under certain conditions, they, like us, either negotiate or reinterpret the communication contract put before them.

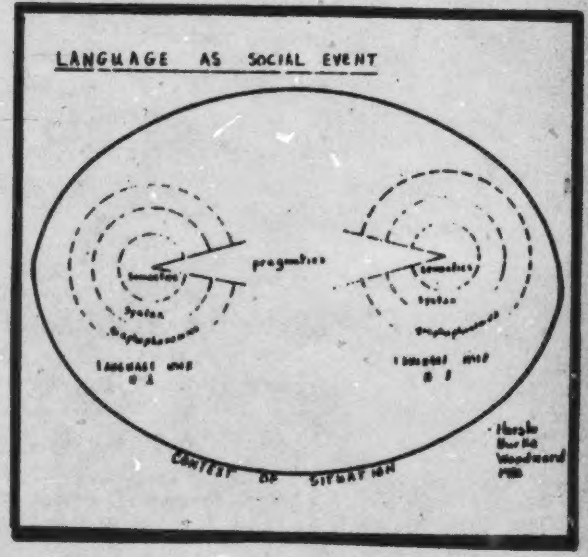
What at first blush, then, may appear to be an unconventional response, from an alternate perspective falls well within the range of conventional options given the setting.

* * *

What looks like nonconvention becomes convention from another theoretical perspective.

* * *

Convention has been largely viewed as relating to the graphophonemic and syntactic systems of language, but this is misguided.


LANGUAGE AS SOCIAL EVENT
pragmatics
semantics
syntax
graphophonemics
LANGUAGE USER # 1
semantics
syntax
graphophonemics
LANGUAGE USER # 2
CONTEXT OF SITUATION
Harste
Burke
Woodward

5.6.3 (Continued)

TEXT	SUPPORT MATERIALS
Oral and written language use involves the orchestration of not only the graphophonemic and syntactic systems but the semantic and pragmatic.	
One cannot even begin to explore what hypotheses are being tested relative to convention at these levels until one understands the nature of the communication contract which has been struck.	
* * *	
Convention is a function of decision-making given a particular context of situation.	
* * *	
It is a partnership; not The Ship of State.	
* * *	
Engaging in the languaging event: that is, deciding to use paper and pencil or whatever, leads not only to development of convention,	

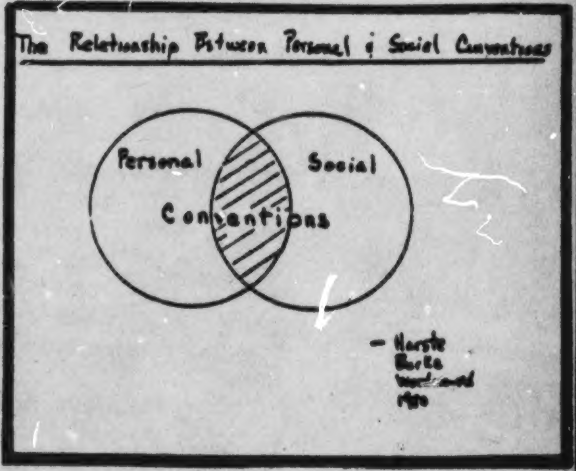
5.6.3 (Continued)

TEXT	SUPPORT MATERIALS

but to the realization that one can build upon those conventions which others use and through which is reflected the fact that they have addressed similar issues.

* * *

It's the relationship between personal convention and social convention. Understanding this relationship is important.


The Relationship Between Personal & Social Conventions
Personal
Social
Conventions

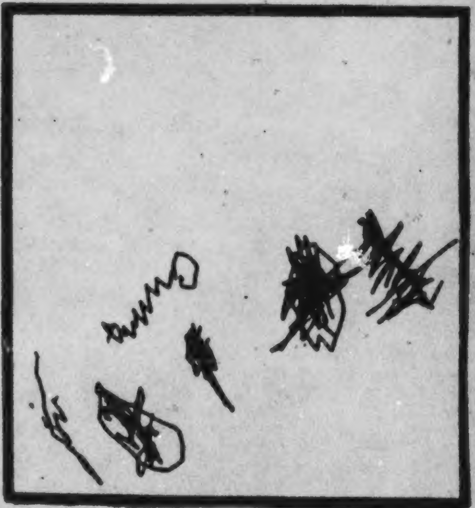
— Harste
Burke
Woodward
1980

* * *

A personal convention is a decision reached which emanated from a need experienced while being a language user.

* * *

It's Charvin's decision to place-hold separate concepts by blobs using space and distance. It is a personal convention which underpins our notion of wordness and which reflects Charvin's schematic readiness for understanding



5.6.3 (Continued)

TEXT SUPPORT MATERIALS

that concept as we know it.

* * *

Schema take form before form becomes schematic.

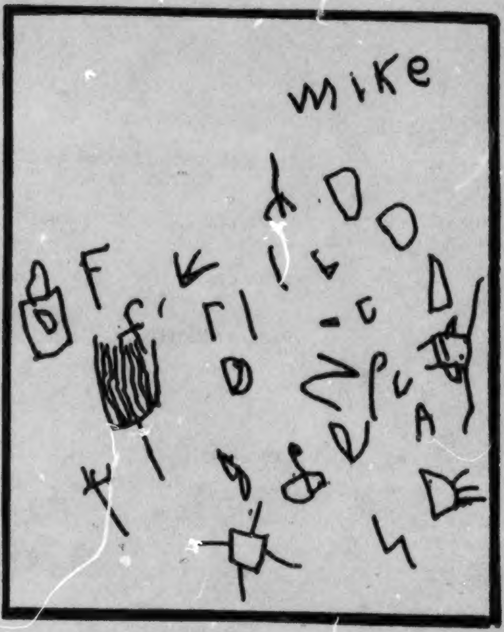
* * *

It's Mike's decision to placehold meaning through space, like Charvin, using a combination of letters and picture-like symbolic forms.

This decision not only builds on Mike's knowledge of how to represent meaning through a series of pictures, but merges what he knows about both art and writing in useful and close proximity.

It is these border scrimmages between systems (art and writing) which are often the most interesting developmentally.

Mike's decisions, at 4 years of age, are a set of real writing decisions



5.6.3 (Continued)

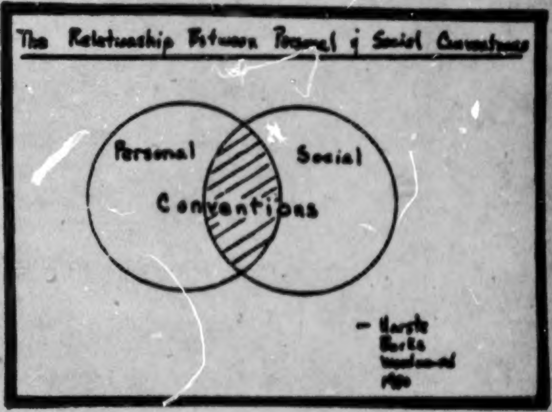
TEXT	SUPPORT MATERIALS

which many of our ancestors not only came to make, but which further reflect the literacy level they attained.

Having come to his decision in a literate society, however, Mike is now ready to use the linguistic information which bombards him; not through wholesale adoption but rather, like us, through linguistic discretion.

* * *

It is important to understand in this regard that a very delicate balance exists between personal and social convention in each of us.


The Relationship Between Personal & Social Conventions
Personal
Social
Conventions
— Harste
Burke
Woodward
1980

Some of what is social convention will always elude us.

I'm always reminded of this fact whenever I send a final draft manuscript away to be published.

5.6.3 (Continued)

TEXT	SUPPORT MATERIALS
I can never believe all the changes they make—even with nonconvention aside!!	
But it is personal convention which gives our language its style and makes it our own.	
Language convention, like language, must be invented from the inside out; it is not an heirloom like your Grandfather's clock which is passed from generation to generation; but more like civilization whose heritage is passed along from immersion in a civilized society.	
And sometimes it's our personal convention, as in the case of James Joyce's stream of consciousness writing, which leads not only us, but others to new ways to mean.	
The word maker, for example, who gave us 'guillotine' would have done well to have talked to Robert,	

5.6.3 (Continued)

TEXT

age 8, who, in trying to capture the ire of his king on paper wrote: ". . . I don't care how you do it, just do it!! I am ruler of this land. If you don't do it, you will be axlacutted, if you don't."

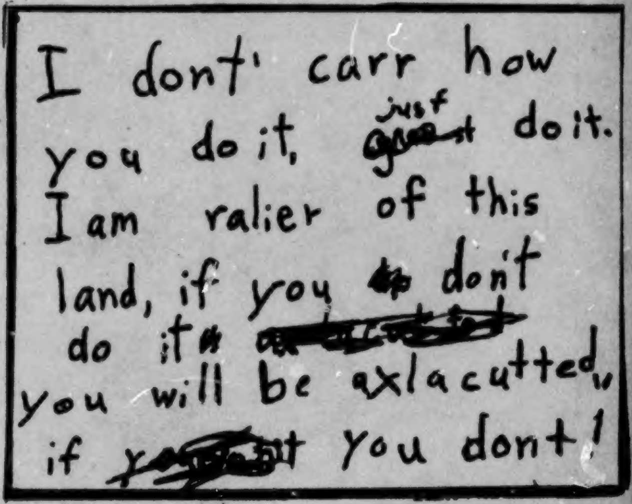
* * *

Conventions are quite simply artifacts of being a written language user in a community of written language users, not prerequisites to, nor criteria for, use.

* * *

If we can accept them for what they are, we will find that social conventions are a rather uninteresting lot, but useful touchstones for the womb to tomb mapping of written language growth.

SUPPORT MATERIALS



I dont' carr how
you do it, just do it.
I am ralier of this
land, if you dont
do it
you will be axlacutted,
if you dont!

5.6.4 REDEFINING DEVELOPMENT: THE CHILD AS INFORMANT
(Conclusions to Symposium)

Linda Crafton
Northeastern University

*Speech given at the Annual Meeting of the National Council of Teachers of English Convention, Cincinnati, November 23, 1980.

TEXT	SUPPORT MATERIALS
What we have been suggesting today is that the most prevalent view of language development can be represented by a formula which states that PRODUCT IN RELATION TO CONVENTION INDICATES GROWTH.	$\frac{\text{PRODUCT}}{\text{CONVENTION}} = \text{GROWTH}$
In contrast to that view of development we would suggest a new formula in which EXPERIENCE IN TRANSACTION WITH PROCESSING PREDICTS LANGUAGE USAGE.	EXPERIENCEⓉPROCESSING ₱ LANGUAGE USAGE
We would like to thank you for your kind attention.	

5.7 LEARNING TO WRITE: A PARENT INVOLVEMENT BOOKLET

by
Virginia A. Woodward
Indiana University

*Document prepared for Head Start Parent
Involvement Pamphlet Series, DHEW
Publication (OHDS), 1980.

Alison, a preschooler, was writing her timetable for watching her favorite Sunday T.V. programs. She was copying from the T.V. Guide as she wrote

6:30 ■ Ch. 6 ■ Mork and Mindy ■ 7:00 ■ Ch. 6 ■ Wonder Woman

To make spaces she used black squares. When her Daddy looked at the timetable he said, "Alison, adults use blank spaces and not black squares to space." Alison replied, "Daddy, I'm not an adult."

Children are not adults as they begin writing. The purpose of communication is the same for children and adults. But, the young child's oral language is not adult oral language. The young child's art and writing are not adult art and writing. The young child needs time to explore and experiment with oral and written language and art for his communication skills to develop.

This booklet is about how young children learn to write and how parents can help them learn.

WHAT IS WRITING

The purpose of writing is to communicate to others in print. Young children need reasons to write to others. Encourage them to write their names on belongings, to write messages to their friends, grandparents, relatives, and to write stories.

5.7 (Continued)

As young children play with sand, fingerpaints, brush paints, pens and crayons, they are eagerly making letters, numbers and pictures. Through these activities they learn the mechanics of handwriting. Handwriting should not be confused with learning to write. Learning to write is putting ideas in print. Handwriting skills develop as children experiment with writing their ideas on paper.

HOW CHILDREN LEARN TO WRITE

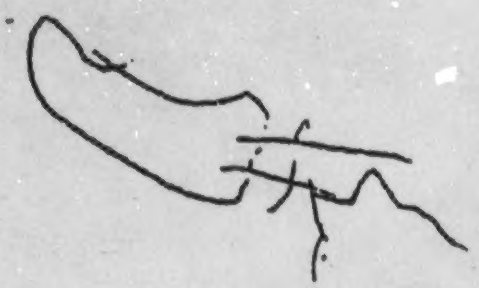
People often think that children learn to write when they are given formal lessons in first grade. Actually, children know a lot about writing and do a lot of it long before they enter elementary school. But like everything else, children begin to write only when they are ready. While some children are eager to write at age three, other children may not show interest until they enter elementary school. Children learn about writing in much the same way they learn about everything else: seeing print, by watching other people write, and by trying to write.

Name Writing

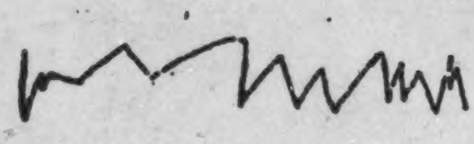
One word that many young children are interested in writing is their first name. But children do not learn how to write their name all at once. Learning to write the way adults write takes time. Because children want to communicate through writing, they start to write by using whatever ways they know.

5.7 (Continued)

One child, Nathan, used several different ways over a period of a year when he was learning to write his name. As a preschooler, he sometimes drew a picture of himself as a way to sign his name.



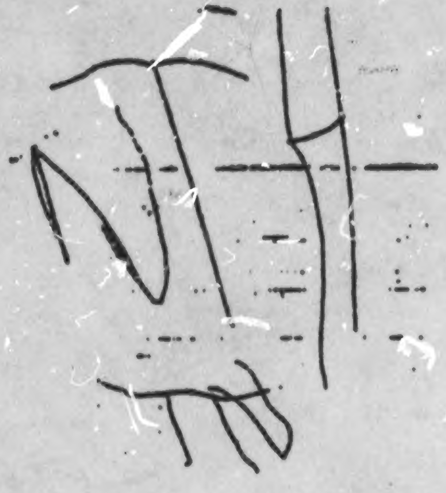
Nathan used "scribble writing":



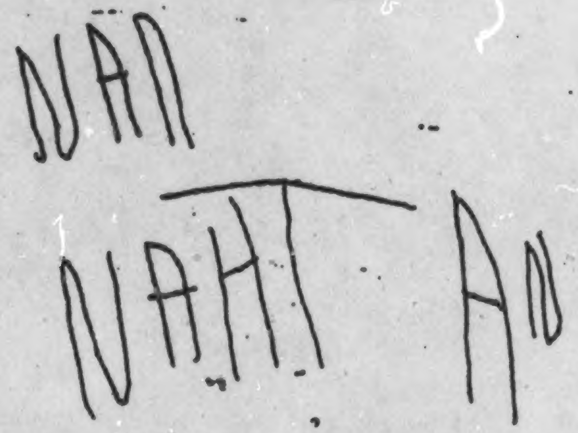
Whenever children don't know how to write something, they may use both drawing and scribbling.

Six months later, Nathan was writing his name using actual letters from his name, but not all of them. He said that both NTH and TN said "Nathan."

5.7 (Continued)



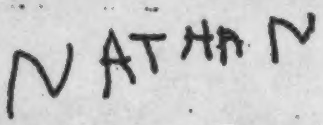
Soon, Nathan was writing his name like this:



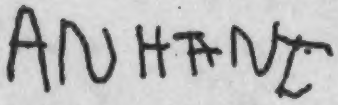
He had started with NAN. But the N was a mistake. Nathan made his own correction by starting over.

Later, Nathan wrote his name using all the letters placed in the correct order:

5.7 (Continued)



As Nathan continued to write his name, he gained control in his letter forms. But on the same day, Nathan said, "I'm going to write my name a different way." This is how he did it:



Nathan, like most young children, did not yet know that the order of the letters of a word makes a difference. Young children experiment with many ways of doing things. By experimenting with writing, children discover exactly how writing works. Encouraging children to experiment and take risks helps them. Experimenting is more important than "correctness."

Young children often write letters backwards or upside down. They also think that you can write either from right to left or from left to right. Gradually children learn that:

- Letters in words must be kept in a certain order.
- Letters cannot be written backwards or upside-down.
- Writing goes from left to right.

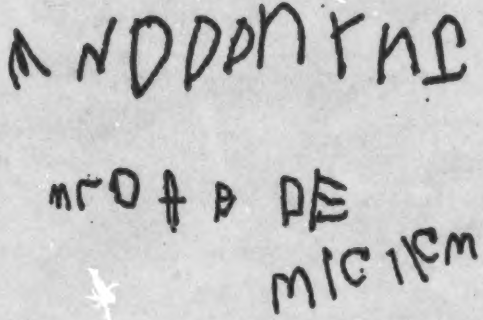
5.7 (Continued)

Children learn these things on their own. They learn by seeing print, by watching others write, and by trying to write. You can help them learn by encouraging them to write whenever they show an interest.

Writing Messages

In addition to writing their names, children like to write messages. Like name writing, children use whatever ways they know to produce a written message.

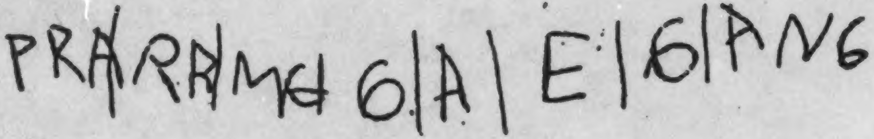
Sometimes chidlren write a series of letters across a page to create a message. When she was in preschool, Michelle wrote this message to her grandmother.



She read the message this way: "We are going to Kings Island this summer." To write this message, Michelle used the letters from her first and last name. It is very common for children to use the letters from their own name when they write messages. The MICllCM is her signature.

5.7 (Continued)

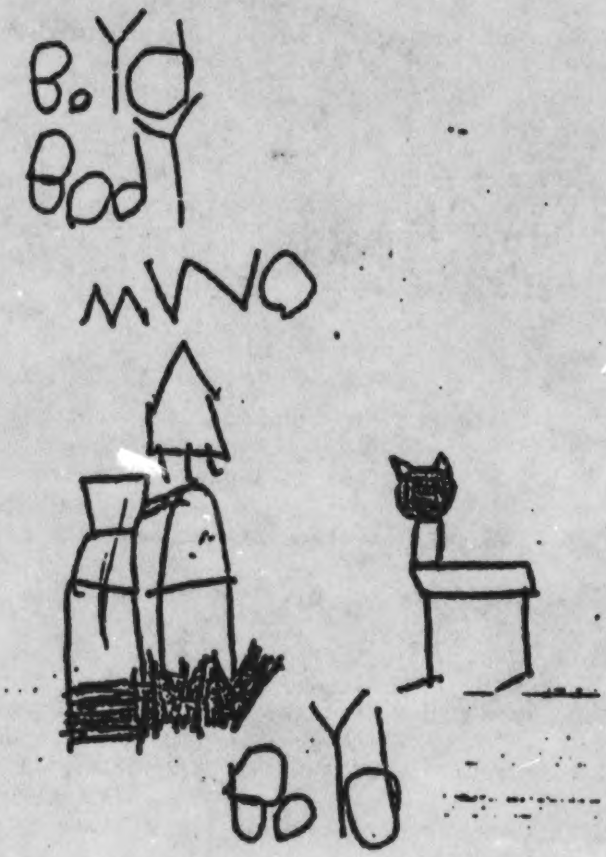
Another child, Megan, wrote this message when she was in kindergarten.


PRARAMG 6|A| E|6|ANG

It said, "Hi, I like to eat because I'm so hungry. I could eat a whole elephant." Megan drew lines to separate some letters and groups of letters. She had not yet begun to use space to separate words. But she knew that words are set off from one another, so she made up a way to show this.

Sometimes older children include drawings in their messages. They will tell you, "I can't write it." This statement tells you that they know that writing and drawing are different. They realize they are using a picture instead of words. Boyd, at almost five, made pictures when he could not write certain words.

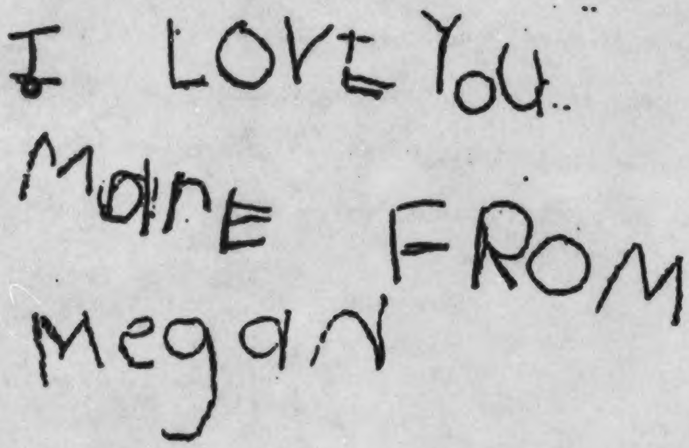
5.7 (Continued)



As children grow older, they become aware of different writing forms and may combine them. At the end of kindergarten, Megan used several writing forms to write a letter and envelope:

5.7 (Continued)

(letter)

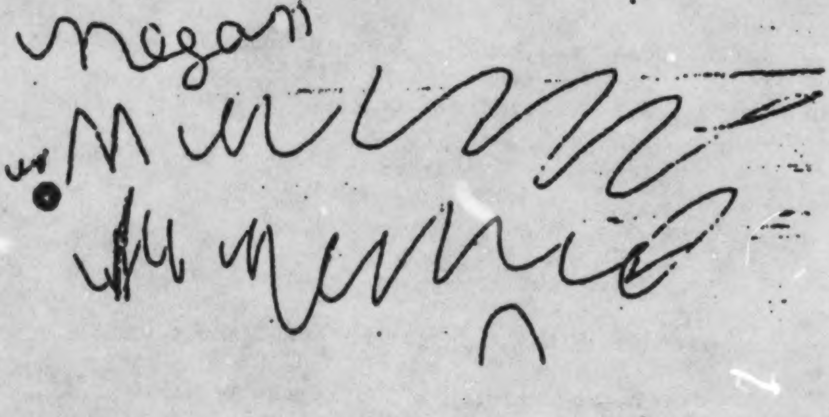


I LOVE YOU

Mare FROM

Megan

(envelope)



On the envelope, Megan wrote her name in cursive writing, a newly gained skill. Mary's address was a printed M and scribbing writing.

5.7 (Continued)

Writing in First Grade

In first grade, children enjoy writing stories and messages. First graders' knowledge of the words they can write increases daily through reading and writing instruction. Children become more skilled at forming letters, words, and sentences. They spell correctly many of the words that they write. They make up the spelling when they do not know it:

I like shorte
peploe/

As children read books and see other people writing, they gradually learn and follow correct rules of writing.

All of these examples tell us several things about how children learn to write:

- Young children like to make written messages.
- Young children can make written messages.
- Young children write in their own way.
- Young children make fewer mistakes as they practice writing. Gradually, their writing looks like adults' writing.

5.7 (Continued)

WHY LEARN TO WRITE

As children grow and develop they learn to control their world. They learn to control peer relationships, to be independent in caring for themselves, as well as to control their language world. The elementary school places major focus on teaching children to understand and to produce print. During the preschool years children need time to explore and to make discoveries on their own about print.

In a print oriented society it is important for all adults to be able to use print. Written language learning begins with toddlers and continues through adulthood. It takes time to learn all the concepts needed to write as an adult would.

HELPING CHILDREN LEARN TO WRITE

Children must see print and watch people writing in order to learn to write. You can provide these experiences by:

- Reading storybooks to your children.
- Writing messages to your children.
- Writing down (printing) what your children tell you about their drawings. (Sometimes children like to make books by drawing pictures and having you write down a story to go with them.)
- Writing each child's name on their pictures or other belongings.

5.7 (Continued)

- Pointing out words on street signs, food containers, store fronts, and anywhere else you see them.
- Letting your children watch you write letters or a shopping list.

Children also need opportunities to write if they are to learn about writing. You can provide these by:

- Giving your children plenty of paper and pencils, crayons, felt-tip pens, and chalk to write with. (Use old envelopes, paper bags, advertisement flyers, or other kinds of scrap paper.)
- Answering your children's questions about writing. Children sometimes ask, "How do you make an E?" or "How do you spell 'circus'?"
- Encouraging your children to write their name on belongings and to write messages to grandparents, other relatives, or friends.

PROVIDING OTHER LANGUAGE EXPERIENCES

Writing is closely related to speaking, listening, and reading. All areas of language are developing at the same time. You can help your children learn about writing by:

- Talking to your children.
- Listening to your children.

5.7 (Continued)

- Reading to your children.
- Asking your children to read favorite storybooks to you.
- Asking your children to read messages they have written.
- Asking your children to read environmental signs.

IMPORTANT POINTS

- Children learn about writing long before they go to elementary school.
- Children learn about writing from everyday experiences--from seeing print, from seeing people write, and from trying to write.
- Children begin to write in their own way. Learning to write like adults takes time and lots of experimentation.
- Children will make mistakes and will correct some of them on their own.
- Learning to write is related to learning other aspects of language, such as talking and reading.
- Children learn to write by trying to write. You can encourage them by providing materials, by praising their efforts, and by displaying their work.

5.8 NO, I NEED A PEN

Joan Chubb
Indiana University

*Paper prepared for Doctoral Colloquium Series, Indiana University, 1980.

In the course of charting children's name-writing development, Hildreth (1934) found that by the age of 3 children had moved beyond "aimless scribbling" to the use of linear markings some of which were organized into discrete symbol units. Somewhat later Durkin (1966), in a study of early readers, discovered that many young children learned to write before they could read. In fact, all but one of the early readers in the Durkin study were able to write when they entered school.

These findings challenge a more commonly held view that language which involves printed symbols requires formal instruction. Both Hildreth and Durkin were curious to learn what factors had encouraged their subjects' early performance. From interviews with parents they determined that the children typically came from homes which had several features in common: books were available, the opportunity to observe and experiment with writing was provided, and the children's questions about print were answered. Almost without exception, parents reported that they had not taught their children to read or write. Hildreth concluded that early writing could be attributed to "maturation in a literate environment." Durkin developed this point further:

> It was only after doing the interviewing that this writer experienced a keen awareness of the abundance of words surrounding a child--on the television screen; on packaged goods; on billboards and highway signs, storefronts and service stations; on cars and trucks, on toys, phonograph records, newspapers and magazines.

5.8 (Continued)

After making this observation, Durkin rephrased her initial question, "Why are some children early readers?" to ask instead, "Why don't more children read before first grade?"

Since the Hildreth and Durkin studies, other researchers have come to the realization that children growing up in an urban environment are in daily contact with many examples of print (Ferreiro, 1977). One result has been a closer examination of children's written language development. A central question posed by these studies has been the role of function in written language. Although children find themselves immersed in a world of signs and labels, written language growth can only occur when print is perceived as meaningful. Smith (1977) has suggested that just as children learn how the sounds of speech are related to events and can make things happen, awareness of the functions of print provides a basis for learning about written language. Those who have looked at children's first writing efforts have found that children often focus on the production of personally relevant information such as writing their name, labeling their art work, and writing messages or letters. A number of researchers (Hill, 1978; Rhodes, 1979; Baghban, 1979; and Woodward, 1980) have demonstrated how such examples of children's early writing convey what has been termed "semantic intent."

Once the concept has been acquired that print signifies meaning, children begin to explore the different rules which regulate written language (Clay, 1977). Some aspects of children's writing which have

5.8 (Continued)

been analyzed include knowledge of letter formation and the use of such rules as linearity, spacing, and directionality. Two current studies by Harste-Burke-Woodward and Goodman-Cox (both in progress) have collected samples of children's drawing and writing and found that children as young as 3-years old have developed sufficient control of written language conventions to differentiate their drawing and writing. Both research groups used similar tasks in which children 3 to 6 years of age were asked to draw a picture of themselves and then to write their names on their work. Although a range of representational control was evidenced, the preliminary findings showed like trends in the characteristics which distinguished children's drawing from writing.

One discrepancy across the data sparked an interest in further interpretation. Harste et al. reported a higher incidence of differentiation between drawing and writing among their 3-year old subjects than was found among the 3-year olds in the Goodman-Cox study. A comparison of research procedures identified one variation in the task conditions which seemed to account for the difference noted in the children's products. In the Harste-Burke-Woodward study the only writing implement used was a felt-tipped pen, while the Goodman-Cox study also used crayons. The researchers hypothesized that "children given a pen and asked to write were more likely to do so than were children given a crayon and asked to write." This explanation for the differences between the two groups of 3-year old's drawing and writing was defined as a "pragmatic effect," that is "aspects of the environment

5.8 (Continued)

together with the rules of language use interacted to influence meaning, or in this instance interpretation and response."

In order to look more closely at young children's knowledge of written language rules and how these are operationalized within different situational contexts, a study was designed which replicated a portion of the Harste-Burke-Woodward research project.

Sample. Twelve children, 6 boys and 6 girls, were randomly selected from the population of a local preschool. The children were all 3-years old, their ages ranging from 3.1 to 3.10.

Procedures. The study included both drawing and writing tasks. These tasks were carried out under two different conditions, drawing and writing with a pen and drawing and writing with crayons. All the children participated individually in two sessions with the researcher. During each session the child was given a piece of paper and asked to draw a picture of him/herself and then to write his/her name on the paper. Following this the child was given another piece of paper and asked to "write anything else that you can." The only variation between the two sessions was the alternate use of writing utensils. The design was counterbalanced so that half the children used a pen during the first session and crayons first and a pen second. After the children had completed the tasks, they were asked to read what they had written. These remarks, as well as any others made during the sessions, were tape recorded.

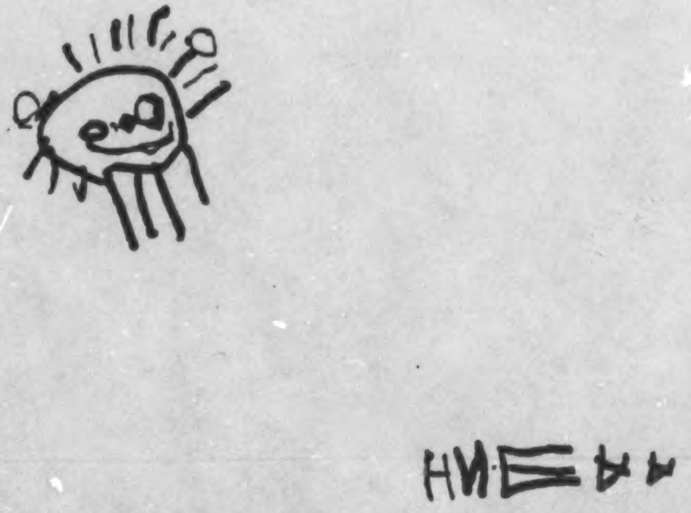
5.8 (Continued)

Results. Based on the findings reported by Harste-Burke-Woodward, it was predicted that there would be more frequent differentiation between drawing and writing when children used a pen as opposed to crayons. Overall, this proposition was supported by the data.

Drawing Picture and Writing Name

Pen condition. Looking first at what the children did when asked to draw a picture of themselves and write their name with a pen, the results showed that it was possible to distinguish between drawing and writing in all 12 cases. This contrasted with the crayon condition in which a similar distinction was possible in only 9 of the 12 cases. As was expected, the degree of representational control or conformance to adult writing standards varied from child to child. Hana, in Figure 1, produced easily recognizable letter forms written in a

5.8 Figure 1.

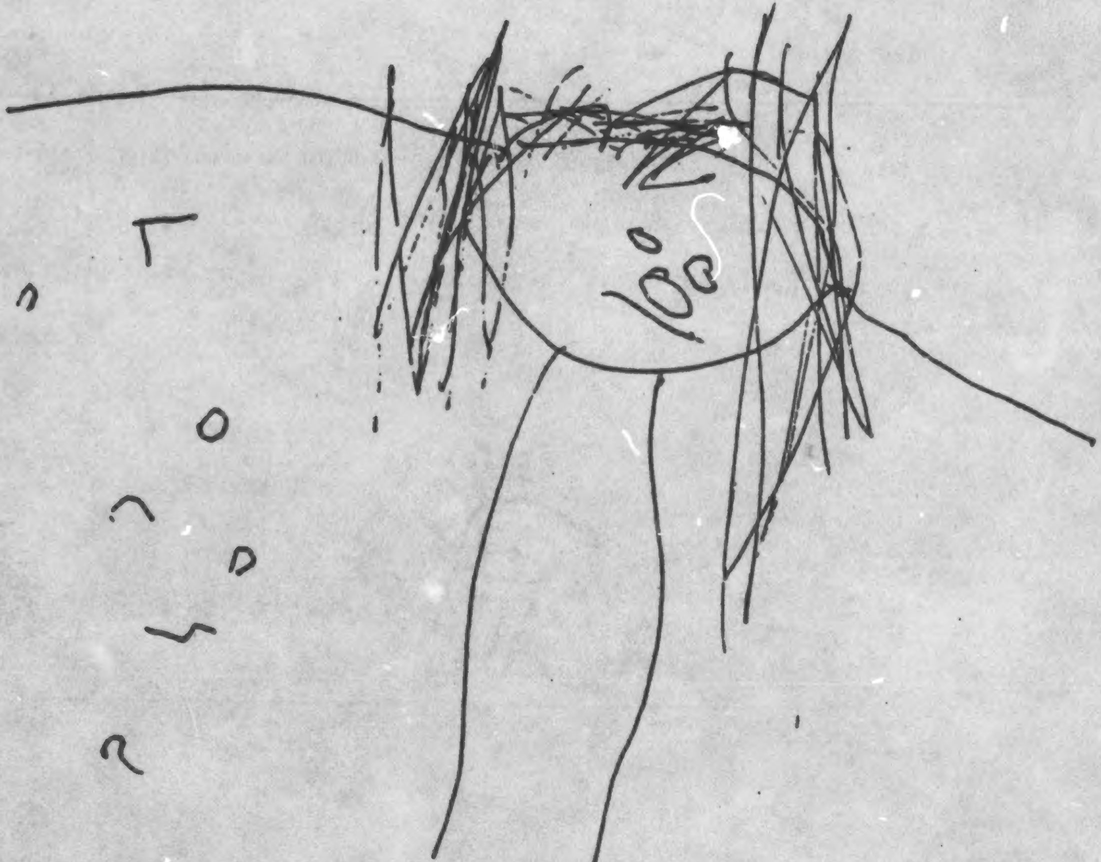


5.8 (Continued)

left-to-right linear sequence. Although she had not yet mastered the precise letter order, Hana wrote all the letters of her first name, as well as the beginning letter of her last name, "E". To indicate that her first and last name are distinct units, Hanna used a dot to separate the "E" from the preceding letters in her name.

In another example of drawing and writing with a pen, Lynn (Figure 2) was less sure of her letter placement. After drawing her picture

5.8 Figure 2.

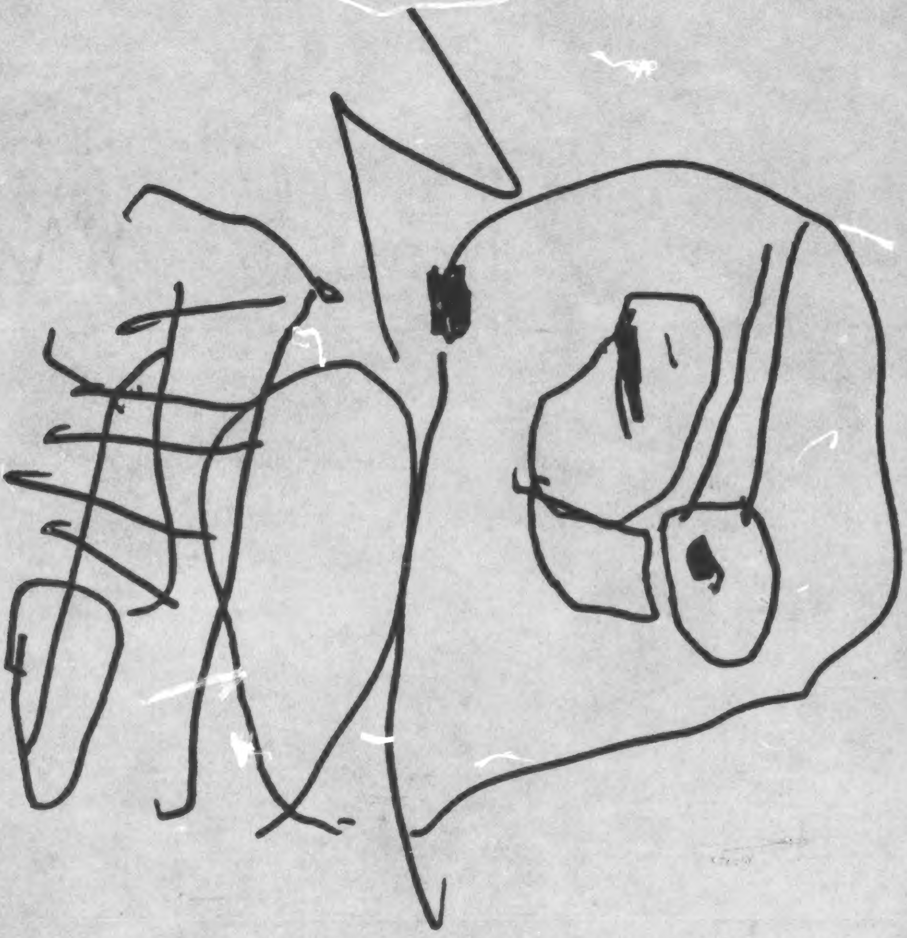


5.8 (Continued)

she turned the paper and proceeded to write her name along the side beginning with an "L" followed by a number of invented letter forms.

Several other children experimented with letter shapes and spatial arrangement. In Loren's drawing and writing (Figure 3) his self-portrait is on the right while on the left of the paper he had produced a stylized version of his signature in which some of the letters are superimposed on others. When Loren was observed in the process of

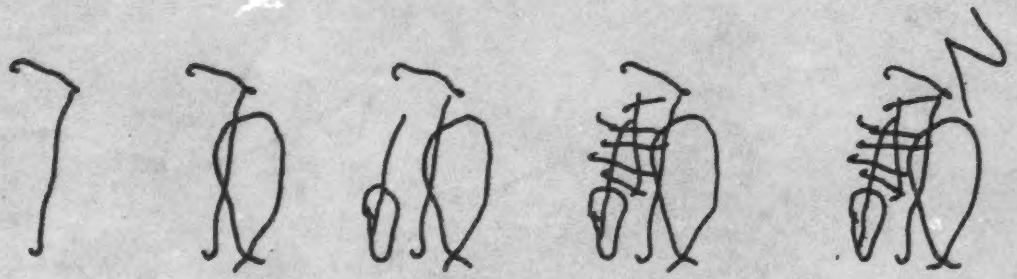
5.8 Figure 3.



5.8 (Continued)

writing his name, however, he demonstrated that he knew the correct letter order. Figure 4 illustrates the steps which Loren followed as he wrote his name.

5.8 Figure 4.

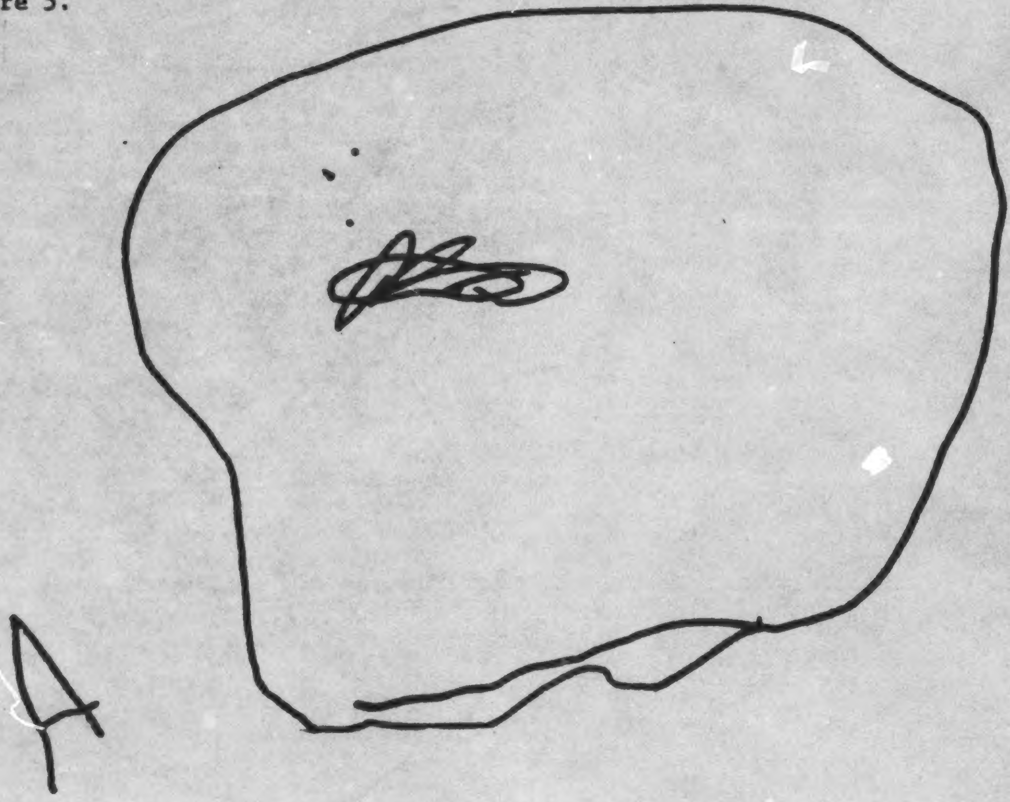


1. 2. 3. 4. 5.

A number of children. such as Andy, confined their signatures to the first letter of their name (Figure 5).

5.8 (Continued)

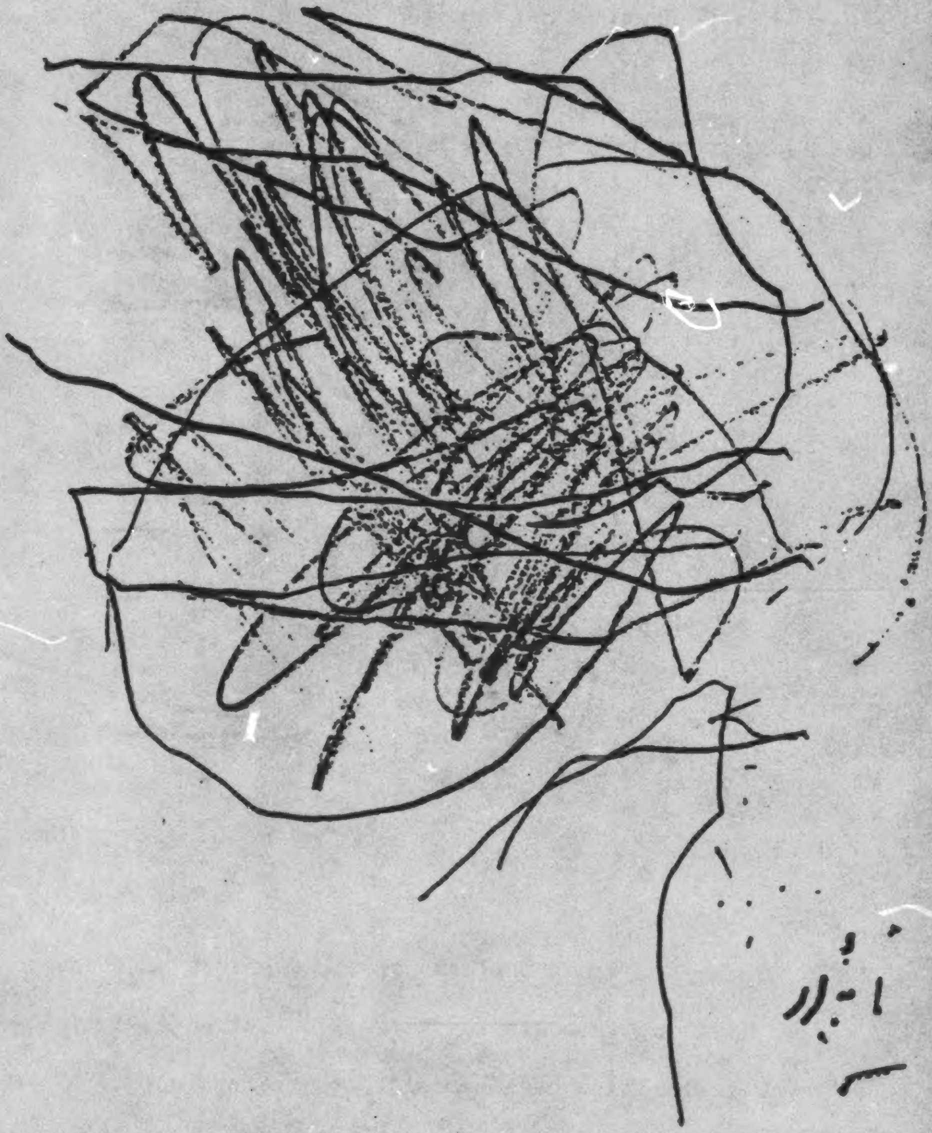
5.8 Figure 5.



Other children produced unique markings to distinguish their writing from drawing. Ian, for instance, indicated his name with a combination of lines and dots in contrast to his writing which was composed of more expansive circular and back-and-forth markings (Figure 6).

5.8 (Continued)

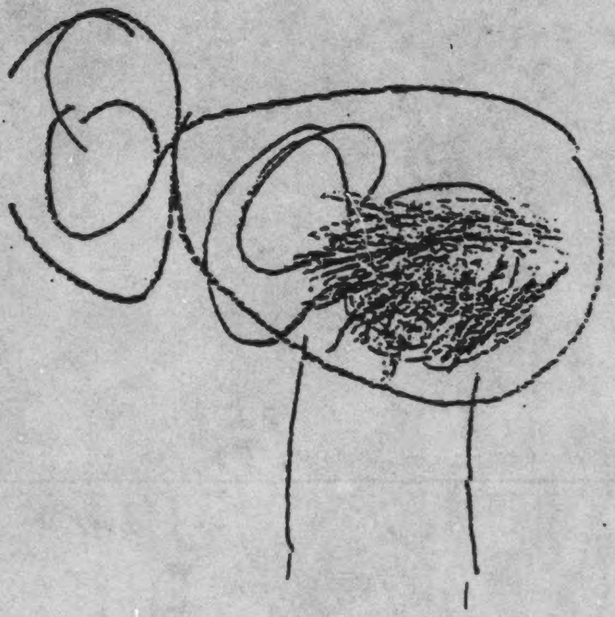
5.8 Figure 6.



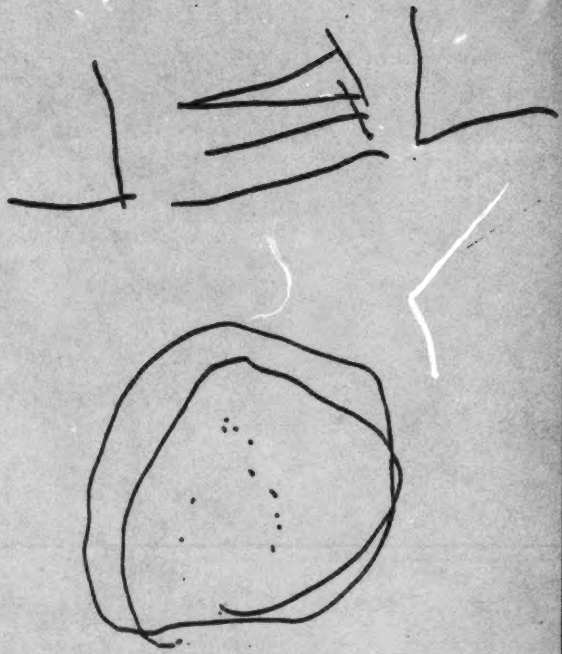
Crayon condition. When the children were asked to draw themselves and write their names with crayons, a distinction between drawing and writing appeared in 9 of the 12 cases. An example of a child

5.8 (Continued)

5.8 Figure 7.



Crayon condition



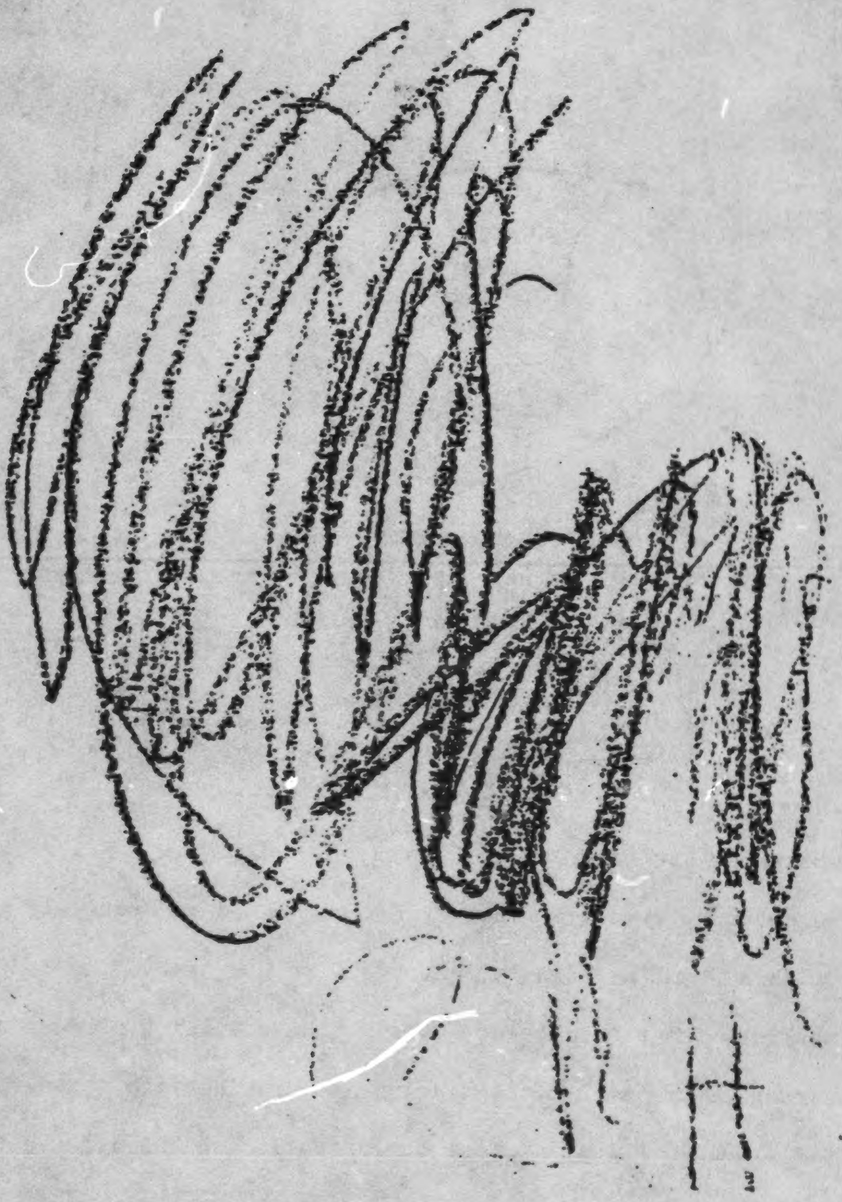
Pen condition

who chose not to write in the crayon condition was Eli (Figure 7). After he had completed his picture, Eli was asked to write his name on the paper. At this point he began to elaborate on his drawing, adding two circular markings which he labeled "eyes." The resulting product was an interesting contrast to Eli's drawing and writing with a pen. In the latter, Eli produced a fairly close approximation of his name in the drawing and writing task.

A comparison of what the children did when drawing and writing in the two conditions of pen and crayons showed not only a quantitative,

5.8 (Continued)

5.8 Figure 8.



5.8 (Continued)

but a qualitative difference. In a number of instances the children's crayon writing was less representational than their writing with a pen. This tendency was also evident in the children's drawing with crayons. One example was Hana's crayon drawing and writing (Figure 8) which was generally not as organized as her drawing and writing with a pen (see Figure 1).

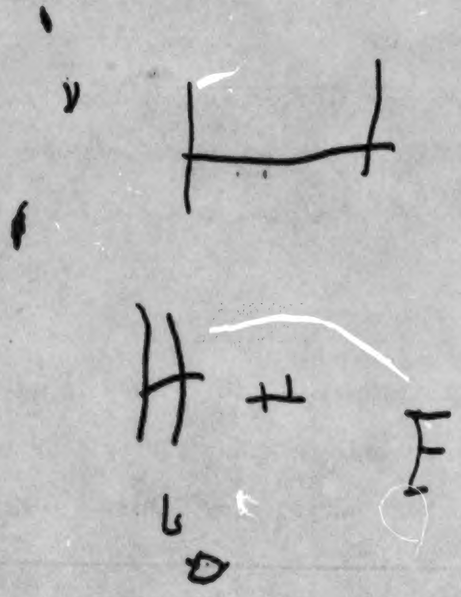
On additional finding emerged when the children's drawing and writing with crayons was analyzed. It was frequently found that when the children moved from the drawing task to the writing task they selected a darker colored crayon, often black, to write their names. This occurred in 6 of the 9 cases in which children wrote their names with crayons, providing further evidence that they had made a distinction between the drawing and writing tasks.

Uninterrupted Writing

Pen condition. After the children had been asked to draw a picture of themselves and write their names, each was given a second piece of paper and asked to "write anything else that you can." Once again, the request was made under two different conditions, pen and crayon. When the children used a pen, 4 of the 7 who produced writing elected to write their names or focused on letters of their names. Heidi, for instance, wrote several "H"s, an "I", and an "E" (Figure 9). She also wrote a reversed "J for John," explaining that "he is a friend who lives down the street."

5.8 (Continued)

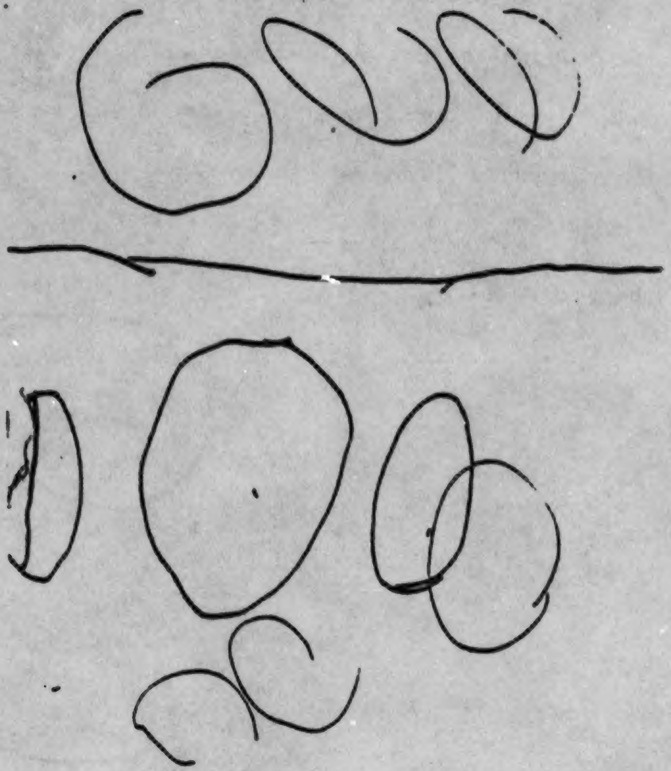
5.8 Figure 9.



The other writing the children did with a pen tended to be less representational than the name writing. In Figure 10, Eli produced linear arrangements of circular forms separated by a line. He wrote from left-to-right, but did not demonstrate top-to-bottom directionality. When asked to read what he had written, Eli studied the paper, then finally asked the researcher, "What does it say?"

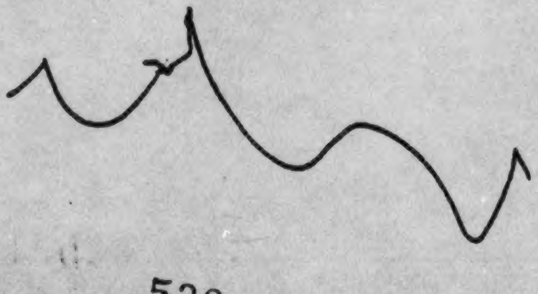
5.8 (Continued)

5.8 Figure 10.



In another example of other writing in the pen condition, Sam made markings resembling a cursive writing style (Figure 11). Sam, when asked to read his writing, told the researcher he had written "your name."

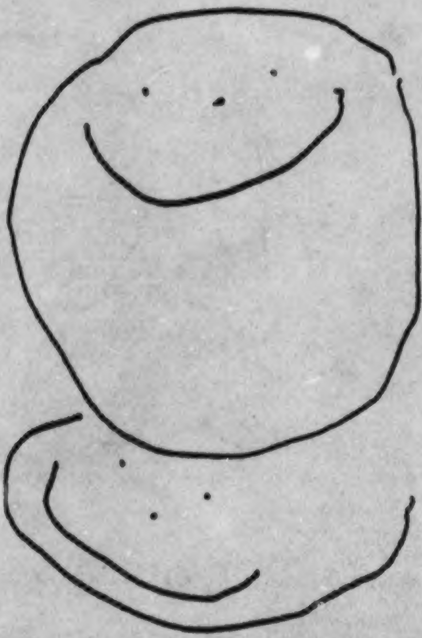
5.8 Figure 11.



5.8 (Continued)

The remaining 5 children complied with the request to write by moving to an alternate communication system. Typically, these children used drawing to convey their ideas. Figure 12 illustrates what Erin produced in the writing task. When asked to read what she had written, Erin responded "Mommy and Daddy."

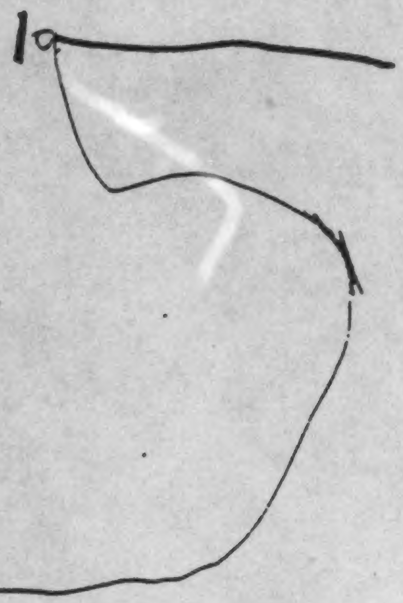
5.8 Figure 12.



Hana, instead of using art to negotiate the writing task, wrote several numerical figures which she read as "number five" (Figure 13).

5.8 (Continued)

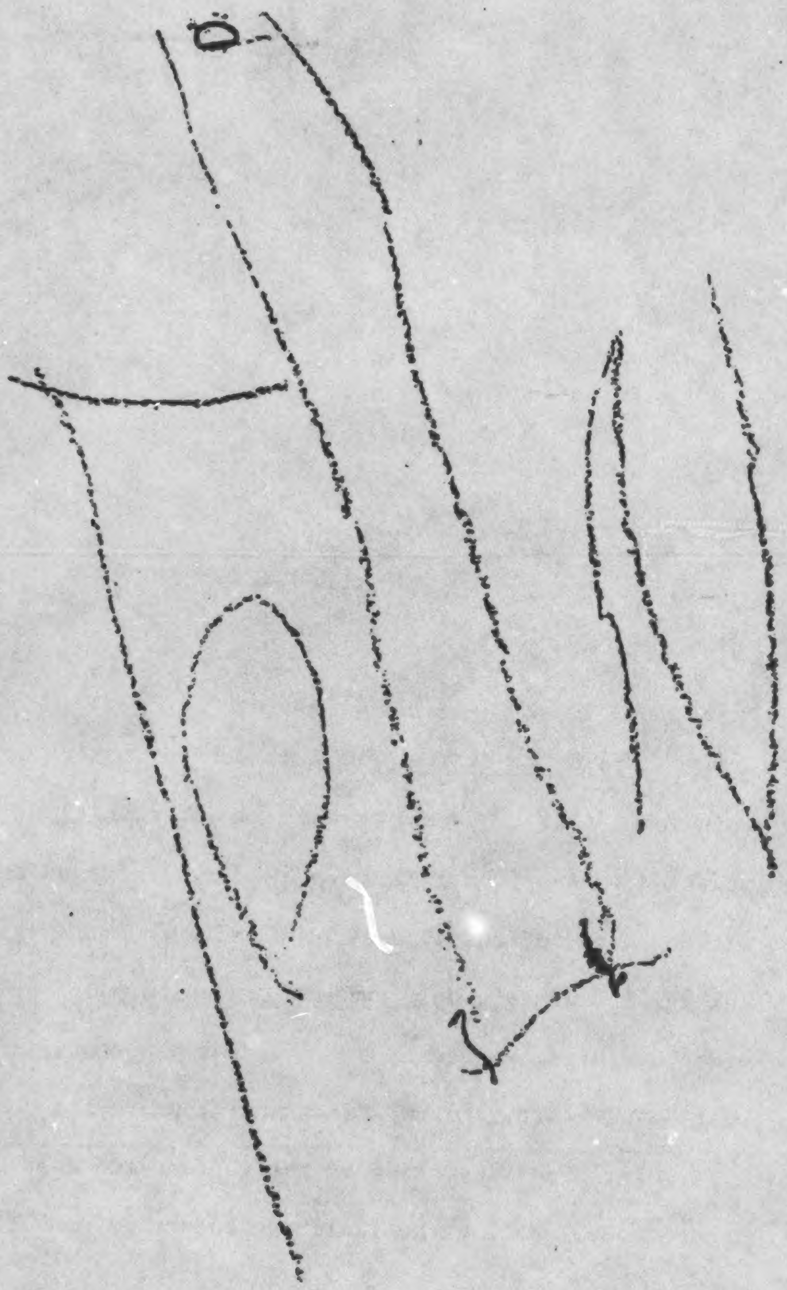
5.8 Figure 13.



Crayon condition. When the children were asked to write anything else that they could in the crayon condition, evidence of writing appeared in 4 of the children's products compared to 7 in the pen condition. In 3 of the 4 cases, the children wrote their names or the initial letters of their names. One child used the cursive form to write her name. A few of the children who wrote also embellished their writing with art. Loren, for example, wrote his name and then added a circular head-like shape at the top and two feet-like projections at the bottom, labeling the finished product "a man" (Figure 14).

5.8 (Continued)

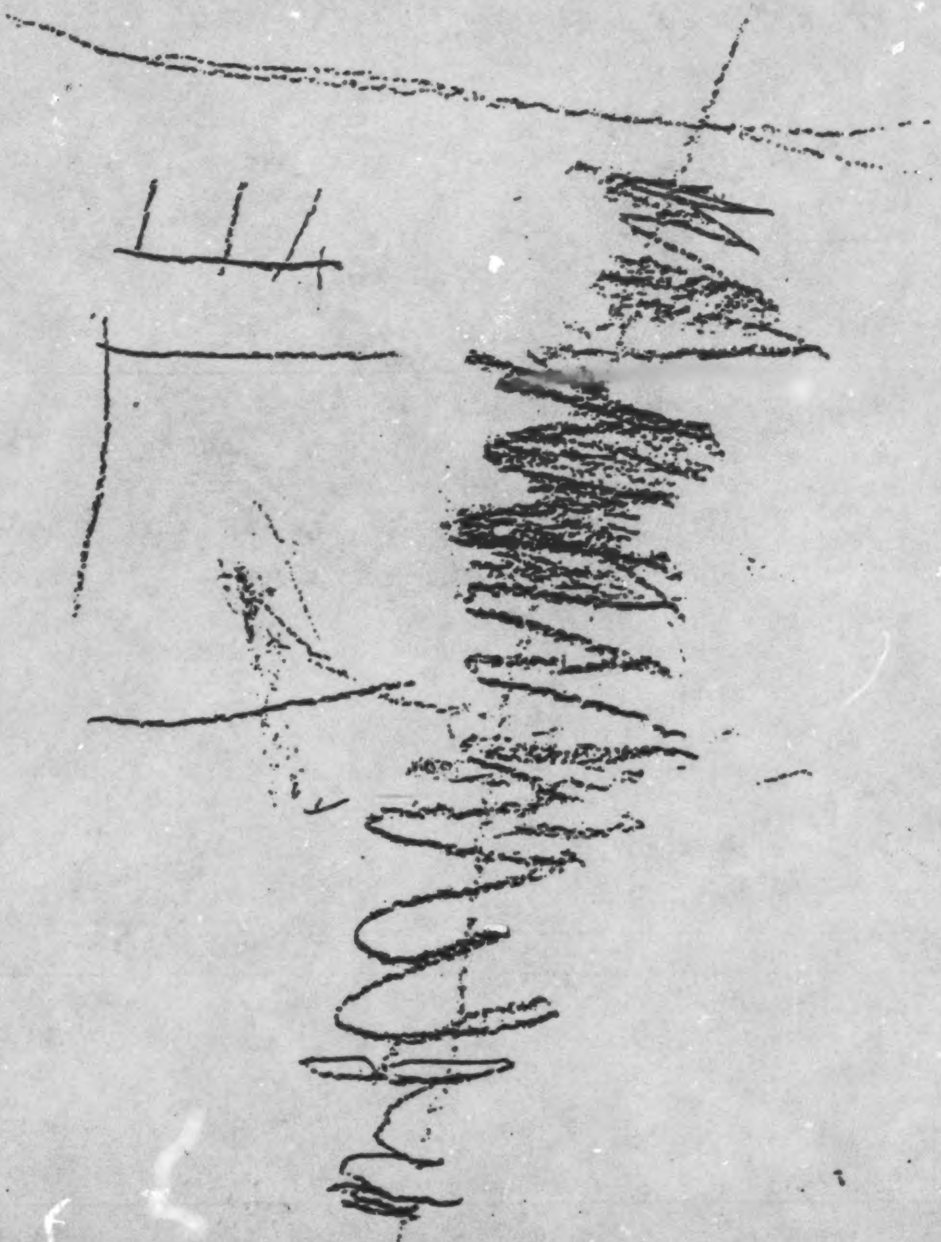
5.8 Figure 14.



5.8 (Continued)

Eli, as part of his crayon writing, drew a ladder-like form which he read as "Jack and the Beanstalk" (Figure 15).

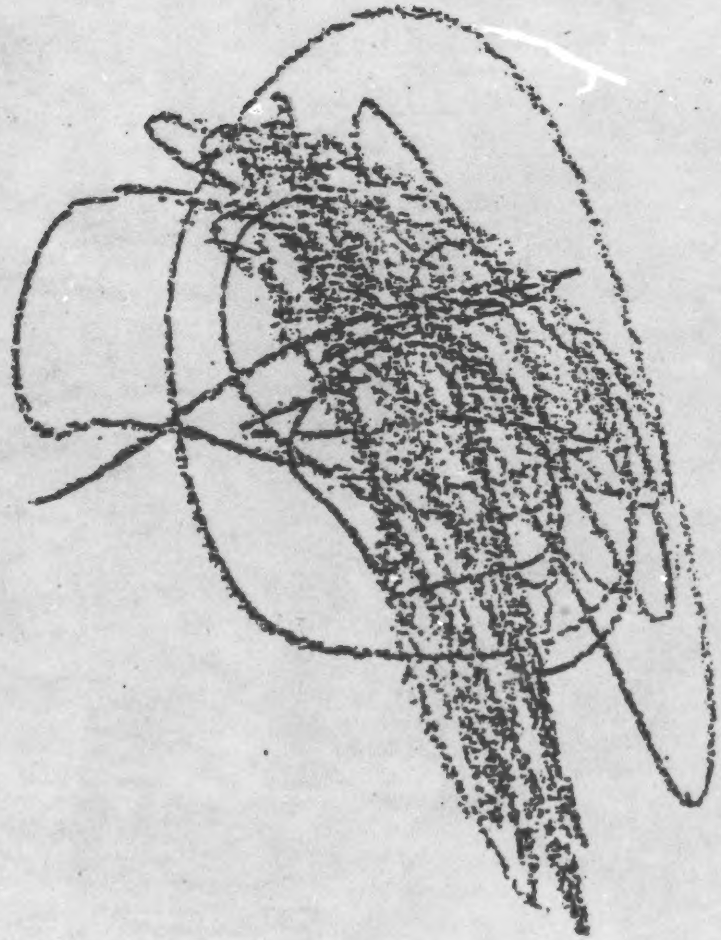
5.8 Figure 15.



5.8 (Continued)

In 7 cases, the children used crayons to draw rather than write. A variety of responses were given when they were asked to read their products. Jesse, who had used an orange crayon, said she had written "orange" (Figure 16).

5.8 Figure 16.



5.8 (Continued)

Others gave their work such labels as "spaceman" or "my house." One child when asked what she had written said, "I don't know," another said, "It doesn't say anything."

The twelfth child in the crayon-writing task did not comply with the instructions. When she was given crayons and asked to write, she said, "No, I need a pen."

Conclusions. Based on the findings of this study, several generalizations seem valid.

First. The results provided additional evidence that children by the age of 3-years old have developed distinct notions of what is drawing and what is writing. Apparently, children are best able to demonstrate their knowledge of these two systems in situations which support differentiation. Asking the children to draw a picture of themselves and then to write their names helped them to define the contrasting tasks in terms of alternate forms of communication.

Second. An analysis of 3-year old's writing confirmed that young children are cognizant of certain written language conventions prior to formal instruction. Such features as letters or letter-like forms, linear and directional organization, and markings which resembled cursive writing were evident in the samples collected.

Third. The extent to which the children's products approached adult writing standards varied across the two writing tasks. When the task was "write your name," the children's writing was more representational than was their writing in the task "write anything else that you

5.8 (Continued)

can." If signatures are personal signs as Clay has proposed, then we could expect that children would be highly motivated to produce their names. The relatively greater control children exhibited in the name-writing task also suggests that print invested with meaning can foster written language growth.

Fourth. When we look at the pragmatic effect as it was operationalized by the two conditions--drawing and writing with a pen and drawing and writing with crayons--it appears that the children's decision to draw or write was influenced by the writing implement they used. The greatest incidence of writing consistently occurred in the pen condition.

Fifth. In those instances where the task or condition did not elicit writing when it was requested, the children turned to alternate communication systems in order to maintain meaning. Usually, the children in this sample used art to express what they wanted to say when writing was not supportable.

Sixth. There was considerable diversity between the children's performance, as well as between each child's products across different tasks and conditions. For example, all the children differentiated between drawing and writing when they used a pen, although the degree of conventional control demonstrated by different children varied widely. When samples of each child's writing were examined, they tended to vary between tasks and conditions. This last finding further emphasizes the importance of context as it affects children's writing performance.

5.9 ORCHESTRATING THE WRITTEN LANGUAGE EVENT

by
Jerome C. Harste
Indiana University

*Speech given at the Annual Meeting of the International Reading Association, April 30, 1981, New Orleans.

TEXT SUPPORT MATERIALS

Mary Hill, a professor of reading and writing at Westminister College in Pennsylvania, had asked teachers who were attending her graduate seminar to survey other teachers relative to the amount of reading and writing done in their classrooms.

The survey was designed to specifically explore the number of opportunities teachers provided children for uninterrupted reading and writing.

One of the teachers reported the following findings for her building:

The kindergarten teacher said, "None," in response to a question about the amount of time which children were provided just to look through books and read or pretend to read them.

Level	Uninterrupted Reading - # of minutes per week	Uninterrupted Writing - # of minutes per week
K	None	None (..."but we do creative endings to stories weekly.")
Gr.1	None Now Second Half - 10 min.	None (..."but we do get into this later in the year.")
Gr.2	"You mean time I read to the children, and they listen?" 10 min, here + there (not daily)	"Too early in the year for this. We will begin this in about 6 weeks. It will be 20 minutes once a week."
Gr.3	None (..."but I used to have it every day when I taught in the country and life was less complicated.")	"Some weeks 1 hour or more depending on what is to be done with English and with Reading. Some weeks none."
Remedial Reading	"I'm afraid these questions don't apply to our situation."	

5.9 (Continued)

TEXT	SUPPORT MATERIALS
Relative to time given children to interact with paper and pen on their own, the teacher again said, "None," but qualified her answer by saying, "but we do creative endings to stories orally."	
In Grade 1 the teacher reported not having time for uninterrupted reading now, but that during the second half of the year 10 minutes per week would be provided.	
Relative to uninterrupted time for writing she again reported, "None now," but added, "We do get into this later in the year."	
The second grade teacher wanted clarification: "You mean time I read to the children, and they listen?"	
The third grade teacher reported, "None."	
She qualified her answer, however, by saying, ". . . but I used to have it every day when I taught	

5.9 (Continued)

TEXT	SUPPORT MATERIALS
in the country and life was less complicated."	
The building had a remedial reading teacher.	
For fun, the student asked the remedial reading teacher the same set of questions.	
Her answer: "I'm afraid these questions don't apply to our situation."	
This is, of course, only a partial report of the data.	
It represented some of the responses one teacher found in her building.	
I've selected it to report to you today because I believe it is somewhat typical of what goes on in all too many schools and classrooms in this country.	
Children, I believe, are not given the time that they should be given to write or interact with books.	
I believe there are two principal reasons for this:	

5.9 (Continued)

TEXT	SUPPORT MATERIALS
One is the belief that such uninterrupted time is not useful; that is, that it's a waste of time; that children learn very little from non-directed activities.	
Two, that children are not ready for these activities; that somehow they have to be taught some things in order to be ready for or make the most of such experiences.	
I wish to argue today that these attitudes are unfortunate; that they do a disservice to children; and that until the beliefs which undergird these notions are changed, beginning reading and writing programs do as much, if not more, to inhibit written language growth and development as they do to facilitate it.	
The issue, it seems to me, centers on our understanding of the literacy process.	

5.9 (Continued)

TEXT · SUPPORT MATERIALS

To illustrate this point, I'm going to use data Drs. Carolyn Burke, Virginia Woodward and I collected from a single language user as part of an NIE research grant.

Our informant today is Latrice.

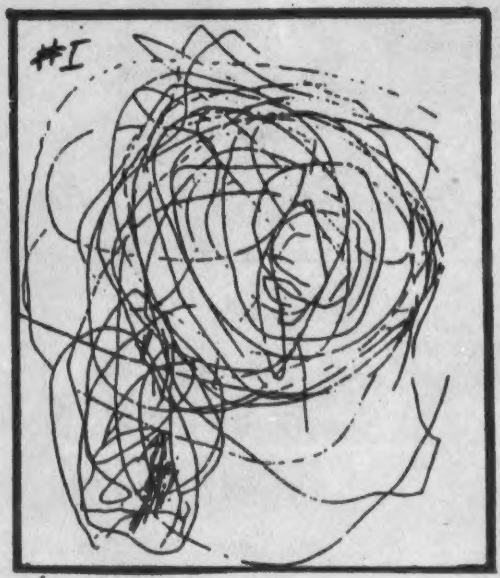
Latrice is an inner-city, Black child who comes from a lower socio-economic area.

She has all of the characteristics of children about whom one teacher once said after I got through addressing an audience, "Well, okay, Dr. Harste, that's fine, but what about the children I work with. They don't have language."

I'm not sure what this teacher would have said about Latrice.

Even we found her data initially more difficult to understand than the other children her age.

Her products initially looked less clear to us; her development less conventional.



Age: 3

5.9 (Continued)

TEXT **SUPPORT MATERIALS**

We asked Latrice to write her name and anything else that she could write.

This is the result. (See #I)

We then asked Latrice to draw a picture of herself.

This is the result. (See #II)

We asked Latrice to write her name on her picture.

Latrice turned the paper over and this is the result. (See #III)

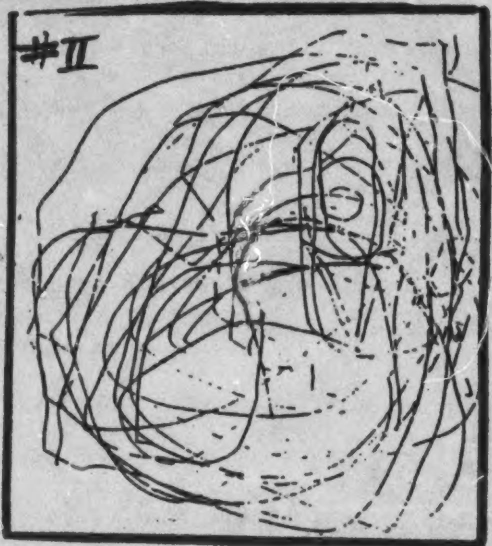
Let's examine this set first.

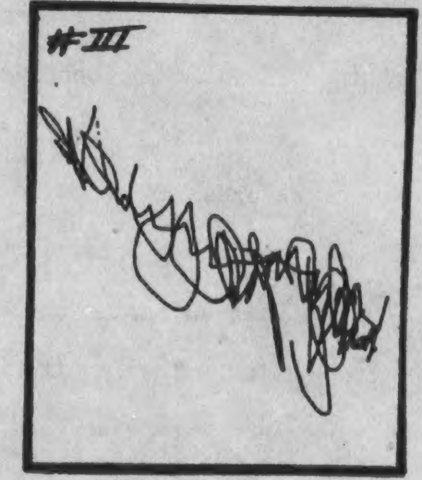
The first thing to notice is that Latrice has organized her art differently from her writing.

Art for her involves a wide circular marking which is centralized and cohesive.

Writing, on the other hand, is linear involving an up and down stroke.

We have found that all children by the age of 3 differentiate writing from drawing.





5.9 (Continued)

TEXT	SUPPORT MATERIALS
Some children use circles for writing and a linear up and down stroke for art, but whichever they select their decision is consistent, systematic, and even rational.	
To illustrate this latter point: We found that if we wrote the child's name the way adults tend to write the child's name for them; that is, all in CAPS, and if we determined the number of letters which had curved lines in them and looked at these in relationship to the number of letters which were composed of linear lines, we could come up with a proportion.	
Based on this proportion we could predict with fairly good accuracy whether the child would use an up or down stroke or a circular stroke for writing.	
"Latrice" when written in all caps has 2 letters--the R and the C--which involve curved lines.	LATRICE c c 5/7 = .60

5.9 (Continued)

TEXT SUPPORT MATERIALS

All the rest of the letters are made of linear lines.

This means there are 5 linear letters out of a total of 7 or a .60 percent probability that Latrice would use an up and down stroke for writint, reserving for the most part circular movements and markings for art.

As you can see from her art and her writing, this is indeed the case.

We found we could correctly predict, using this simplistic method, about 93% of the time.

If we just used the first letter of the name we did almost as well--91% of the time we were right.

What all this means is that the child has made a conscientious decision; what looks like scribbles are not scribbles at all, but organized and systematic reflections of decisions which have been made

5.9 (Continued)

TEXT	SUPPORT MATERIALS
relative to how the written language and artistic systems are organized.	
And now you know why I no longer like the word scribbles when it's associated with children's writings.	
Scribbles suggests it's unorganized . . . random.	
It's not.	
Nor is it "pseudo-writing," nor "mock-writing," nor "non-representational form writing," nor lots of other things I've heard it called.	
One of Dr. Burke's and my graduate students was an art major before coming to do work with us.	
She says she has no problem calling this art.	
Well, I'm telling you, I have no problem calling this writing.	
When we recognize what it really is we can go about the business of appreciating and valuing it.	

5.9 (Continued)

TEXT SUPPORT MATERIALS

Latrice and her colleagues made a clearer distinction between art and writing for us when we asked them to draw first and then write, than they did when we had the tasks reversed.

Because adults typically see the 3 year old as being able to draw but not necessarily being able to write, they more typically ask children of this age to draw rather than write.

Pragmatically then, drawing is the typical contract a 3 year old comes to expect.

Given a 3 year old, an adult, a paper, a pen, and an oral request, the contractual expectation is one of DRAW.

The Pragmatic Contract

3-year old + Adult + Paper + Pen + Oral Request = DRAW

When you buy into the pragmatic expectation children bring to the setting by asking them to draw first and then asking them--after they are

5.9 (Continued)

TEXT	SUPPORT MATERIALS

engaged in fulfilling the expected contract--to write, the request itself semantically highlights what it is you want, and as a result you get more 3 year olds to engage in the contract you desire.

If you give a 3 year old a pen and ask them to write without first engaging in drawing, about 25% of them will draw rather than do what you ask; write.

If you clarify the contract by buying into what they expect, almost all of them make the distinction you want.

We say "almost all" because Joan Chubb, a research assistant on our project, found that if you give a 3 year old a pen, as opposed to a crayon, and ask them to write, you also reduce confusion.

Children at 3 know what typically pens afford writing and crayons afford drawing.

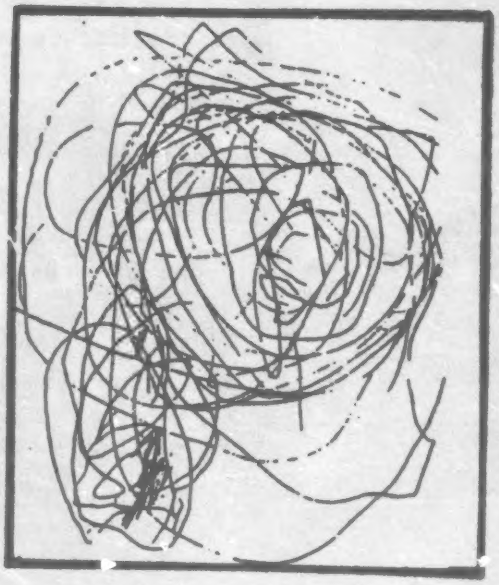
5.9 (Continued)

TEXT	SUPPORT MATERIALS

In fact, when Joan asked one of her 3 year olds to write with a crayon, her young sophisticate said, quite matter-of-factly, "No. I need a pen."

Here we see, then, a dynamic transaction between context of situation, pragmatics, and cognitive processing.

When all of these elements operate as the signs they are in natural language situations, the child uses them to orchestrate the decisions which are reached.



When we compare Latrice's efforts here with her efforts under the condition of write anything you can write, it initially looks more confused.

Most of this confusion, however, is a function of the fact that all we have in this form is access to the product.

When we look at the process there is no confusion.

5.9 (Continued)

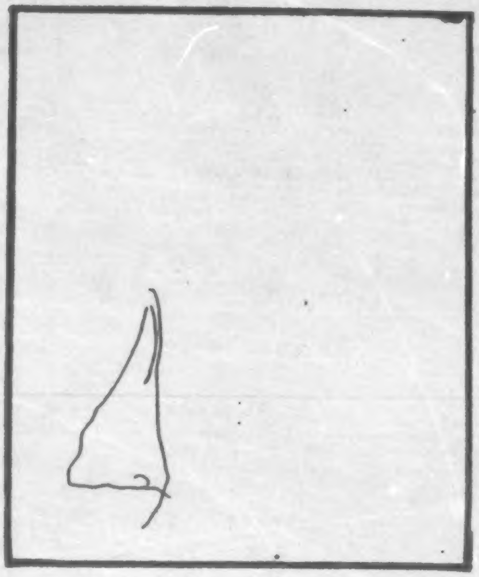
TEXT

SUPPORT MATERIALS

We initially asked Latrice to write her name.

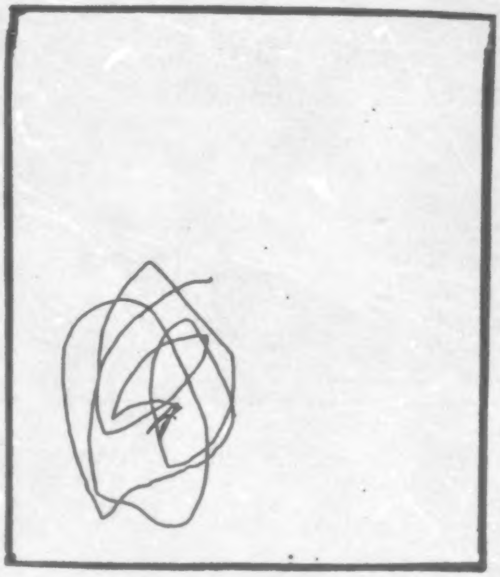
Latrice began by meticulously making some downward and sideward strokes; seemingly attempting to make the letter L.

The linearity of her markings, given what we already know, leads us to conclude she is engaging in the contract we requested; namely writing.



When pushed to write anything else she could write, Latrice picks up her pen and using a free-flowing circular motion all but obliterates this initial display of literacy.

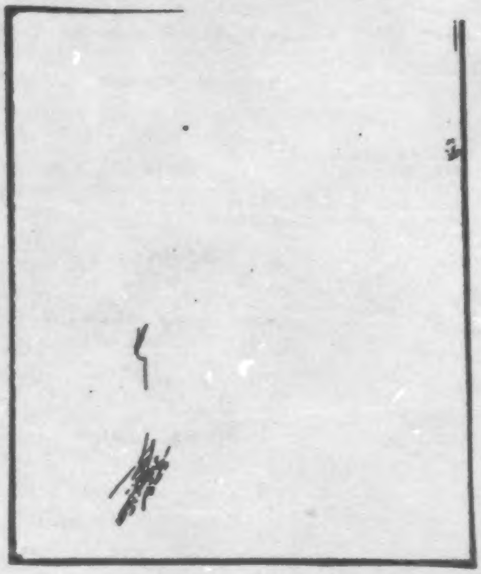
Again, knowing what we already know about how Latrice organizes art differently from writing, we now suspect she has negotiated the contract in this gesture moving from writing to art.



5.9 (Continued)

TEXT **SUPPORT MATERIALS**

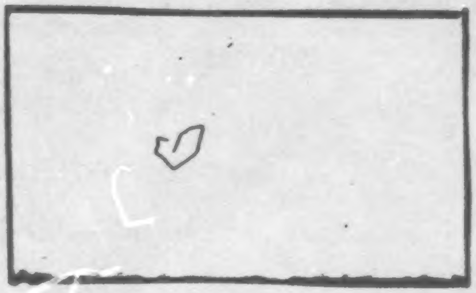
Midway in this second effort, Latrice says, as much to herself as to the researchers, "Gonna write an i."



Without seeking a clean spot on the paper, she produces a line with a dot attached to the top.

Latrice dots the 'i' with such savagery that even later, when she has written still more of what she can write, it is clearly visible.

At this point Latrice announces she is "Gonna make a dog."



Notice she says "make" rather than "write."

She then does so using a movement we now recognize as art.

Latrice gets very involved at this point and at each progressive stage her picture becomes increasingly tied and busy.

The result is the final product which you have seen.

Now having seen the event, let's analyze it and identify what insights it

5.9 (Continued)

TEXT	SUPPORT MATERIALS

provides into literacy and literacy learning.

When we look at the process we can trace Latrice's moves from writing to art to writing to art.

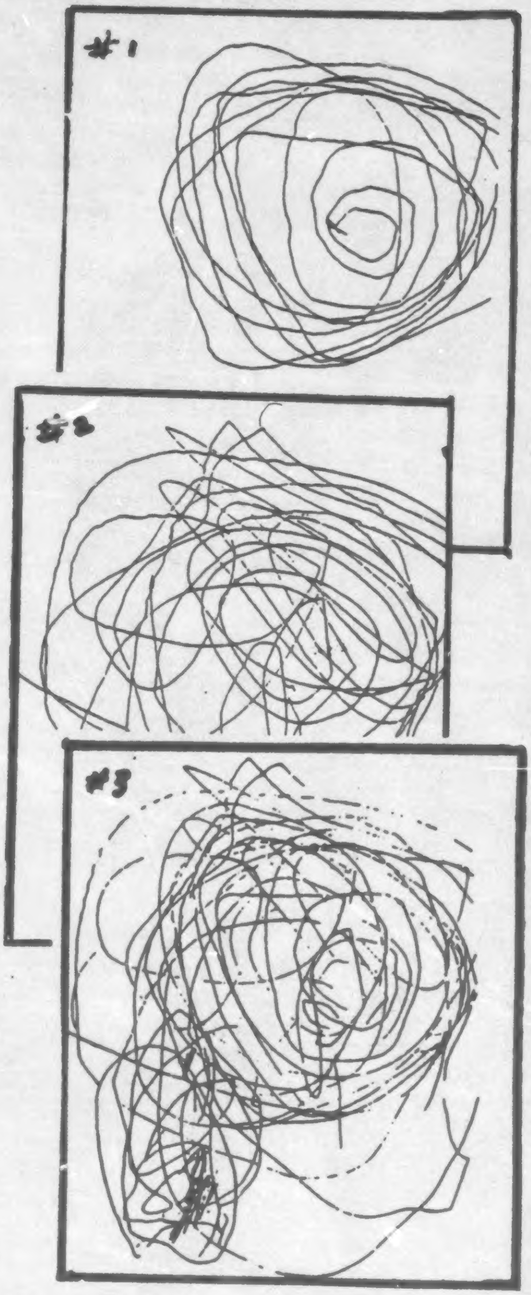
At a minimum we know that Latrice already knows then that art and writing are communication forms which can be produced with paper and pen.

But she knows more than this, for she moves freely between them in an effort to mean.

Look, how clever she is: Moving back and forth between art and writing buys her time.

She never has to stop the process.

How much better off is she than the child who can't move freely between the 2 systems anymore . . . who writes a word, who stops, who can't proceed, who is so concerned with form--a learned response I might add--that editing precedes production.



5.9 (Continued)

TEXT	SUPPORT MATERIALS

It's important to understand that Latrice's decision to move between art and writing in order to mean is a process strategy used by many if not all good writers.

It's a keep-going strategy.

That's one of the reasons why we find charts and maps and diagrams and pictures in books and newspapers and other texts.

Text production is not print production, _per se_, but an orchestrated set of multimodal cues carefully laid forth in an attempt to sign meaning.

Latrice knows some things about writing right now which, if her experience in school is typical, she will "unlearn" and then "relearn" in order to become proficient later on.

I wonder what would happen if the strattegies we taught in schools would allow children to build on what

5.9 (Continued)

TEXT SUPPORT MATERIALS

they already know, rather than forcing them to focus their attention.

The paranoia we and our students have with print and correctness is a rather dysfunctional outcome of most current instruction from what evidence I gather as I visit schools and watch language users.

But back to Latrice. Latrice demonstrated that she has a schemata for writing which includes both writing and art.

Equally important, but likely to be overlooked, is the fact that given a paper and pen and a request to write, Latrice picks up the pen and makes a mark on the paper.

She could have you know, attempted to eat it . . . She could have stuck it in her ear . . . She could have gotten up and closed the door.

She doesn't, and neither do other children her age.

5.9 (Continued)

TEXT	SUPPORT MATERIALS
They, like Latrice, write.	
Latrice already understands that making marks on paper is a form of social action; that given a certain kind of language; namely a request to write, one does so by responding physically by making marks on paper.	
This is a very important and complex learning.	
If we ask ourselves, "How does she know this?", we will have to conclude that she already has a schema for writing.	
And if we push ourselves even further we will have to conclude that the only way she could have gotten such a schema was by being or having been a writer--either vicariously or directly--at some point prior to the encounter we see here.	
So the one thing we know is that at age 3 Latrice has already been a reader and a writer.	

5.9 (Continued)

TEXT SUPPORT MATERIALS

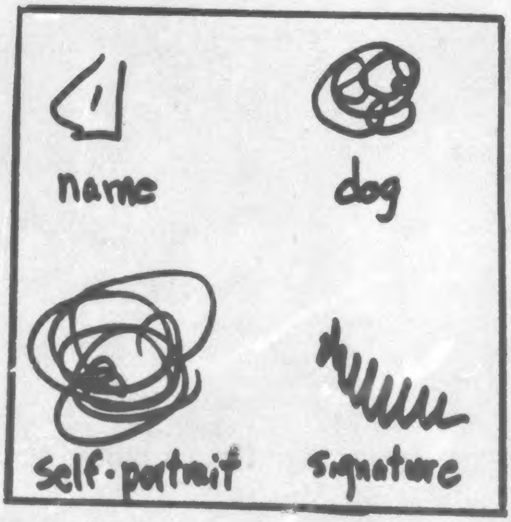
There is no other way to explain her knowing what to do given the task we gave her and the performance she gave.

At one level, then, Latrice's schema for writing includes a general readiness to make marks on paper given a particular kind of language request.

But at a more specific level Latrice already differentiates art from writing and is beginning to take note of its cultural form.

Latrice is only 3, but from her involvement as a reader and writer she has discovered much about how written language works and how it is organized in this culture.

It's also important to note, I think, that each set of markings represents a new and different concept: Her name, a dog, a picture of herself, her signature.



5.9 (Continued)

TEXT SUPPORT MATERIALS

So here we see that Latrice, in addition to all the other things she does, also writes the way it means, using space and distance to placehold and separate ideas.

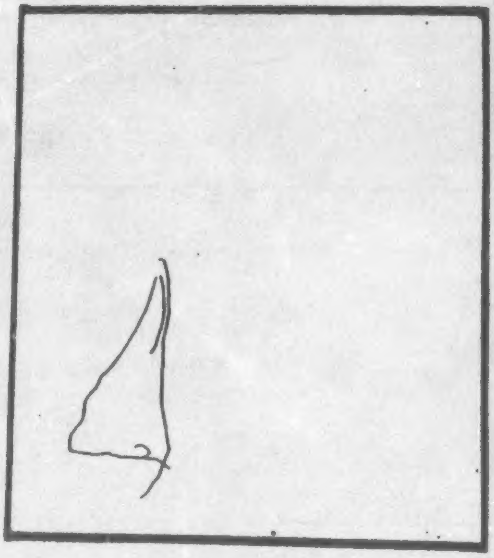
This coordination of space conceptually seems an early precursor to the development of our notion of wordness and syntax.

It also reflects an early notion of "signness."

Latrice, when she finished, was asked to read what she had written.

All of her reading responses fell within the semantic set of things she said she was writing when she was engaged in that process.

This, it seems to me, is evidence of the fact that despite the lack of conventional form, her markings are serving a personal sign function--key components being retrievability and memorability.



5.9 (Continued)

TEXT	SUPPORT MATERIALS

Nor is this all we can learn from Latrice.

On another level, it's important to note the role which speech played in this writing event.

Latrice's initial written response to our request of "Write your name and anything else you can write," was a linear marking on paper.

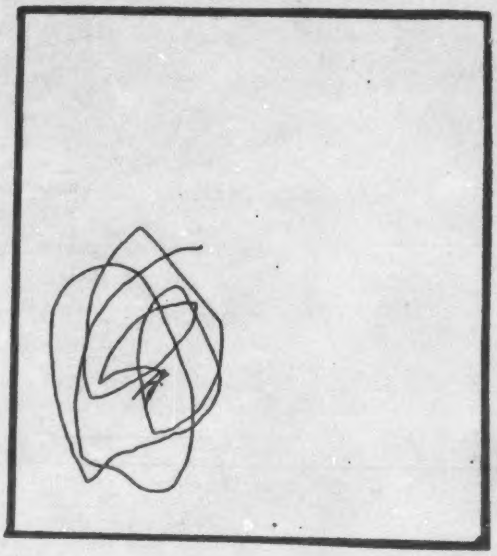
She then moved to art.

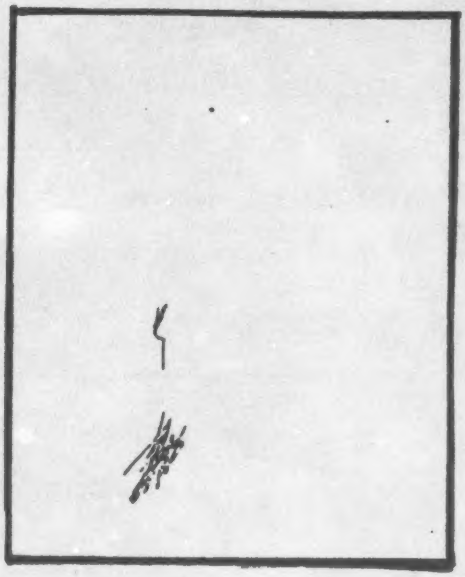
Before she once again engaged in writing she announced, "Gonna write an i."

One way to look at her oral language here is to note that it serves an organizational function which directs her writing.

Once she completes the making of her "i," our continued request, "Write anything you can write," again moved her to comment: "Gonna make a dog."

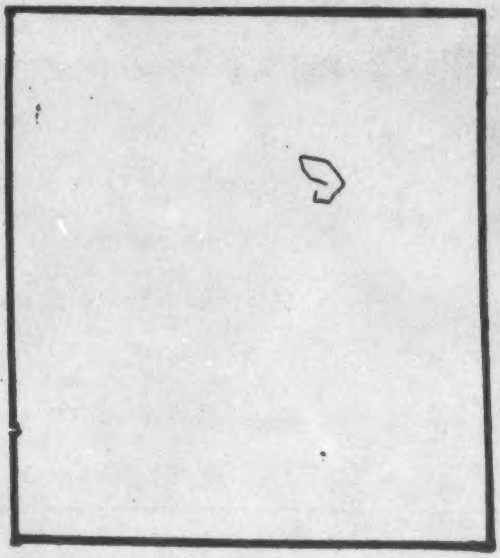
Once again her speech shows evidence of a plan.





5.9 (Continued)

TEXT SUPPORT MATERIALS



And note that this time she says she will "make" a dog, as opposed to her earlier, "write an i."

Her speech at this point not only reflects the general plan she has, but also that within this general plan there has been a conscious decision to move to drawing rather than writing.

Speech during writing, I have found, almost always reflects the presence of a plan either in abandonment or in operation.

There has been a long, unfortunate history of separating reading from writing, speaking from writing, art from writing, and reading, writing, speaking, and listening from each other.

One must in light of our data, pause to ask, "Why?"

Clearly the cause must be that theoretically researchers have seen these areas as distinct.

5.9 (Continued)

TEXT	SUPPORT MATERIALS
Not only was each assumed to have different origins, but their joint participation in language operations was considered to be of no basic psychological import.	
Even when written language and speech are closely linked in one operation as I have found them to be in reading and writing, they are reported as if one did not exist, or treated as if they are separable processes belonging to two completely different classes of phenomena.	
This I believe is unfortunate.	
Language is a multimodal event.	
And so is language learning.	
Observations of children in the experimental situations which we set up show that children not only act in an effort to fulfill a reading and writing contract, but also speak during the fulfillment of that contract.	

5.9 (Continued)

TEXT	SUPPORT MATERIALS
This speech arises spontaneously and seems to assist the child in planning.	
It is, as such, an intimate part of the writing process.	
Nor is this the case for only young language users.	
I use speech the same way Latrice does when I write.	
I talk to myself during writing . . . I argue with myself . . . and I often give initial forms of papers in speech form as I'm doing today with you.	
Writing occurs over time.	
My dialogue with colleagues prior to my ever making a mark on the paper is also an important part of the process.	
To study writing as we have in the past by looking at the markings left on paper, is to study dinosaur tracks without benefit of observing the beast or his habitat.	

5.9 (Continued)

TEXT	SUPPORT MATERIALS
While this is understandable given the nature of paleontology, it is inexcusable given the nature of written language literacy.	
Art is an integral component of writing.	
So is drama, reading, and speech.	
The lines which we as adults draw between the expressions of language and the systems of communication are arbitrary.	
No proficient teacher or learner can focus on these separate lines without destroying the event itself.	
Latrice knows this.	
Unfortunately, we need to "relearn" it as do, all too often, the students with whom we work who have been systematically taught to abandon what they once knew.	
Now having taken some time to look at the written language process, let's summarize what we know about Latrice and her literacy learning:	

5.9 (Continued)

TEXT	SUPPORT MATERIALS
1. We know she knows that writing serves a pragmatic function; a doing; a social action of a particular sort.	
2. We know that she knows that one can placehold thoughts with marks on paper.	
3. We know that she knows that the formation and placement of those marks bear a relationship to intended meaning and conceptual reality.	
4. We know that she knows that while both art and writing serve a semantic placeholding function, both are organized differently and both can be used for purposes of communication.	
5. We know that Latrice has been a reader and a writer prior to this particular encounter and that she has learned a good deal from these encounters.	

5.9 (Continued)

TEXT	SUPPORT MATERIALS
6. We know that Latrice, in the face of print, makes a series of highly complex and orchestrated decisions. These decisions involve the use of pragmatics, context of situation, semantics, syntax, and symbols in a truly sign-semiotic sense.	
Latrice, has, it is important to note, learned all these things prior to any formal instruction, because she has had opportunities to engage in the process on her own.	
As Halliday has noted, and as Latrice has so aptly demonstrated, each of these encounters with language has provided her not only the opportunity to learn language, but to learn about language, and to learn through language.	
As adults we often view literacy through the bifocals of convention.	
That's why I wanted to introduce you to Latrice.	

5.9 (Continued)

TEXT	SUPPORT MATERIALS
Latrice can help all of us overcome what I see as a wanton case of "Warnerian Chauvanism."	
Most continuums in language end with conventional control whether the topic is literacy, spelling, grammar, or story form.	
This is unfortunate.	
Control of form cannot and should not be equated with either the on-set or the attainment of literacy.	
If and when it is, we have no growth and development continuum, just a magic trick--now you see it; now you don't.	
Literacy must be said to be present when we have evidence that a decision has been made in the face of written language which wouldn't have been made if that written language were not present.	
The orchestration of a complex set of decisions represents literacy, not its success or its correctness.	

5.9 (Continued)

TEXT	SUPPORT MATERIALS
Defining literacy in this fashion is not only important for our understanding of functional literacy, but it is equally important for our continued understanding of literacy beyond convention.	
It is only when we take a definition of literacy such as this one, seriously that we can recognize written language growth as continuous and universal for all of us.	
What marks the difference between Latrice and us is not the kind of decisions we make, but the quantity of information we have learned to use and orchestrate as a sign potential.	
And it's important to see Latrice as fast gaining on us.	
Latrice, given her performance, demonstrates a real access to literacy.	

5.9 (Continued)

TEXT	SUPPORT MATERIALS
It is a disservice to both Latrice and our present understanding of literacy to view her important literacy achievements as "precursory" or as a "pseudo" form of literacy, or as "literacy readiness."	
They are none of these.	
They are and represent the real stuff of real literacy and must be recognized as such.	
It is only by recognizing the importance of the written language hypotheses which Latrice is testing in relationship to the orchestrated demands of literacy that we can come to a decision as to what experiences we can provide her which will facilitate her continued perception and growth.	
Our task as reading and writing educators is not so much to direct her learning--for clearly Latrice demonstrates that she has a viable	

5.9 (Continued)

TEXT	SUPPORT MATERIALS

and important agenda of her own--but to facilitate perception and the testing of those written language hypotheses which she demonstrates she is currently interested in solving.

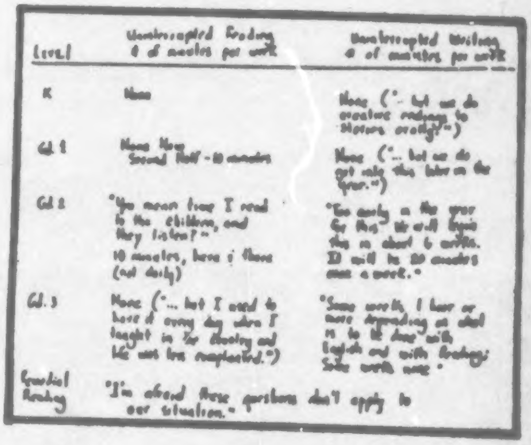
That's why uninterrupted reading and writing opportunities are so important.

And that's why I want to return now to where I began in this presentation.

Latrice is only 3 years old.

She is a sophisticated written language user.

She has 2 years left before she enters kindergarten; 2 years left to explore written language on her own as a participant learner in a community of written language users; 2 years before she faces a teacher who will probably provide no time for uninterrupted reading and writing



Level	Uninterrupted Reading # of minutes per week	Uninterrupted Writing # of minutes per week
K	None	None ("- but we do creative [illegible] to [illegible] [illegible]")
Gd. 1	None Now Second Half - 10 minutes	None ("... but we do get into this later in the year.")
Gd. 2	"You mean time I read to the children, and they listen?" 10 minutes, two or three (not daily)	"Too early in the year for this" We will begin this as about to write. It will be 20 minutes once a week."
Gd. 3	None ("... but I used to have it every day when I taught in [illegible] and life was less complicated.")	"Some weeks, 1 hour or more depending on what is to be done with English and with Reading; Some weeks none."
Remedial Reading	"I'm afraid these questions don't apply to our situation."	

5.9 (Continued)

TEXT	SUPPORT MATERIALS
because "she's not ready for such experiences!???"	
She has 5 years left until third grade where life in the city is so hectic that there is no time.	
And Lord help her if she ends up in some kind of remedial reading and writing class because having opportunities to orchestrate for oneself the written language event somehow doesn't even apply in this situation!?!	
All I can say is that thank goodness she's coming into your classroom and that you understand.	

5.10 THE YOUNG CHILD'S CONCEPT OF STORY

by
Virginia A. Woodward
Indiana University

*Speech given a. Annual Meeting of the
International Reading Association,
St. Louis, May 1980.

TEXT SUPPORT MATERIALS

Today I wish to discuss the young child's concept of story.

The Language Experience task was used to elicit (1) the kinds of understandings children have of the concept of story in the writer/reader role, and (2) the language strategies used by the writer/reader in this particular context.

In the Language Experience task, the child and researcher first talked about their favorite story. The child was then asked to choose 3 or 4 toys from a box which could be used in making up a story. The child composed a story and dictated it to the researcher scribe. When the story was printed, the child was asked to read the story. One day later, the child was asked to re-read the story.

5.10 (Continued)

TEXT	SUPPORT MATERIALS
I shall discuss the development of Nathan's "concept of story" from age 3 years 1 month to 5 years 1 month.	
What has been the evolution of text/context relationships for Nathan in his 5 stories collected every six months from 3 years 1 month on?	
In story 1, Nathan picked the toys, an elephant and a gun. His dictation was a dialogue between himself and the researcher. It was closely tied to the pragmatics of the Language Experience settings. His story read:	
An elephant like this one.	(Refers to elephant)
Elephant eats you.	
He shoots you.	(Using gun to shoot)
In this story, Nathan has chosen 2 toys and his story is an inventory of behavior.	
In story 2, the following toys were picked: a gun, car, candle, elephant. When the researcher asked, "What do you want me to write?" Nathan said, "Write this down, Say,"	

5.10 (Continued)

TEXT	SUPPORT MATERIALS

This is a story.

This elephant.

This car.

This candle.

Again, Nathan is having a dialogue with the researcher. Story 2 is an inventory of the objects chosen. In the Inventory Level the concept of text and context are not distinguishable. The text is immediately available by the objects or the child's own actions toward the object in this context.

A truck, gun, airplane and elephant were chosen by Nathan to compose a story. Nathan begins his story by inventorying the objects chosen. He dictates, in story 3,

> Lion, (the elephant represents another animal), an elephant, airplane and then truck and gun.

In the last two statements Nathan moves beyond the Inventory Level to

5.10 (Continued)

TEXT	SUPPORT MATERIALS
the Descriptive Level by providing information about the actions of the objects beyond the situational context. His story reads:	
A tire of the truck flew off and blew up the windows. Then the gun shot the mountains.	
In story 4, Nathan remains at the Descriptive Level in story composition. A gun, elephant and eraser are the toys picked. Nathan chose to transform the eraser in this situation to represent a boat. He dictates:	
I'd like to go to California and	(He shoots gun)
shoot people. Throw an elephant	(He pretends to throw elephant)
at the tiger and throw the bomb at	
the boat and shoot the gun at the	(He shoots gun several times)
boat.	
Story 4 is interesting because the text stands alone, more or less. Nathan is very involved with the objects in this setting (i.e., shooting gun, pretending to throw	

5.10 (Continued)

TEXT	SUPPORT MATERIALS

elephant) and he has carefully described each object picked. But, his descriptions of each are extended beyond this situation.

Nathan's fifth sto[illegible] moves to a higher level of text/context relationships. His composition now has the text features of fiction. Nathan chose the truck, airplane, dollar and money clip. In composing his story, Nathan borrowed from his past experience with the story grammar of Fred Flintstone and dictated:

> Fred Flintstone banged into a airplane. He fell into a ditch and he lost his money and his pin he lost. And then Fred Flintstone got out of the ditch and then he found his money and his pin.

To story 5 it is possible to apply Stein's story grammar analysis. Fred Flintstone is the protagonist. The setting includes banging into an

5.10 (Continued)

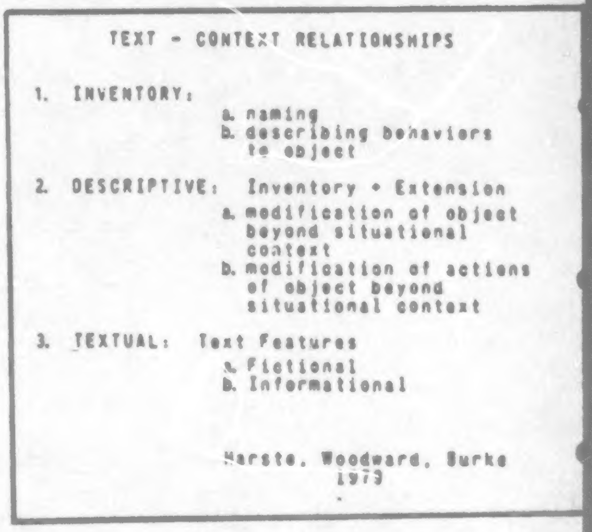
TEXT	SUPPORT MATERIALS

airplane which caused him to fall into a ditch and lose his money and pin (the initiating event). He gets out of the ditch (response) and (the consequence) he found his money and pin. This story would fit Stein's reactive episode category.

As a writer, Nathan's evolution of "concept of story" illustrates well our proposed hierarchy of text/context relationships from analyzing many Language Experience stories.

1. Inventory a. naming
    b. describing behaviors to objects
2. Descriptive: Inventory + Extension
    a. modification of object beyond situational context
    b. modification of actions of object beyond situational context
3. Textual: Text features
    a. Fictional
    b. Informational

(Show text/context relationship overhead)



TEXT - CONTEXT RELATIONSHIPS

1. INVENTORY:
    a. naming
    b. describing behaviors to object
2. DESCRIPTIVE: Inventory + Extension
    a. modification of object beyond situational context
    b. modification of actions of object beyond situational context
3. TEXTUAL: Text Features
    a. Fictional
    b. Informational

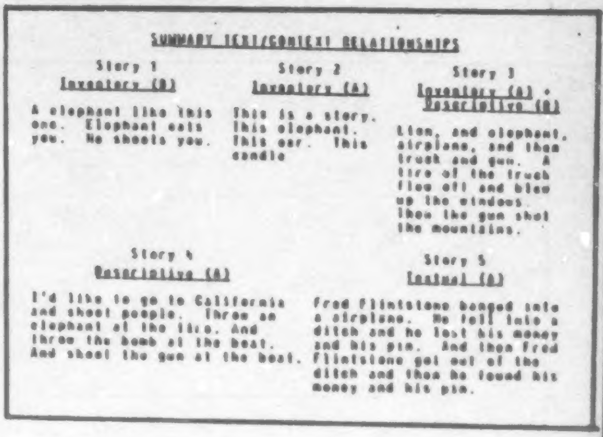
Harste, Woodward, Burke
1979

5.10 (Continued)

TEXT	SUPPORT MATERIALS

In re-looking at Nathan's five stories we can see that his stories over time included all levels and subsets except informational (3b). The summary chart helps us to understand more clearly how Nathan explicitly or implicitly included particular level(s) of Inventory, Descriptive or Textual in his writings. In stories 1, 2, 3, he explicitly expressed the Inventory level using both a + b in different stories. In story 3 he included two levels explicitly--the Inventory and Descriptive. Story 4 was Descriptive (a). In story 5, we see the implicit use of the Inventory Level since the Fred Flintstone story used all the toys selected. The description of the objects was implicitly expressed also as Nathan utilized a fictional story grammar. The use of any one of the levels is considered story to the young child.

(Show summary chart)



SUMMARY TEXT/CONTEXT RELATIONSHIPS

Story 1
Inventory (B)

A elephant like this one. Elephant eats you. He shoots you.

Story 2
Inventory (A)

This is a story. This elephant. This car. This candle

Story 3
Inventory (A) + Descriptive (B)

Lion, and elephant, airplane, and then truck and gun. A tire of the truck flew off and blew up the windows. Then the gun shot the mountains.

Story 4
Descriptive (A)

I'd like to go to California and shoot people. Throw an elephant at the tire. And throw the bomb at the boat. And shoot the gun at the boat.

Story 5
Textual (A)

Fred Flintstone bonged into a airplane. He fell into a ditch and he lost his money and his pin. And then Fred Flintstone got out of the ditch and then he found his money and his pin.

5.10 (Continued)

TEXT

I suggest that the Inventory and the Descriptive Levels of text/context relationships are precursors for the Textual Level. Therefore I suspect it is a continuum through which all writers proceed. In different story writing contexts children as well as adults will explicitly or implicitly express various levels as they compose stories.

Now I wish to discuss the child's use of language strategies as a reader in the Language Experience situation.

Strategy I is Predicting from what you know about print.

In the Language Experience task the child's story is printed on a paper. Then the child is asked to read his story. One day later the child is asked to re-read the story.

In reading the story immediately after it was printed Nathan age 3.1 said, "I'll count the h's." He pointed

SUPPORT MATERIALS

An elephant like this one.
Elephant eats you.
He shoots you.
(Show story #1 overhead)

5.10 (Continued)

TEXT	SUPPORT MATERIALS

to the "h" in this, elephant, and shooting counting one, two, three. Nathan is aware of print, the letters on the paper, and their names. In the reading task, he focused on the features of form of written language rather than the semantics.

In the task of reading and re-reading story 2, Nathan, age 3.6, maintained the inventory level of his composition. He underlined each line in the first reading repeating Nathan to represent meaning for each line of print. For re-reading he drew from the story composition situational context. As researcher I had used a Curious George episode as my favorite story. This time Nathan read and underlined each line labelling it Curious George. His focus was on the message each line presented.

Nathan, age 4.6 responded, "I can't read" as he was introduced to both

A elephant like this
elephant. Elephant
eats you. He shoot you.

(Show story #2 overhead)

This is a story.

This elephant.

This car.

This candle.

(Show story #4 overhead)

5.10 (Continued)

TEXT | **SUPPORT MATERIALS**

---

reading tasks of story 4. I said, "Read it the best you can." Nathan focused on the last line on the paper. He read, "The shoot the boat with a gun" in reading and "The gun shot the boat" in re-reading.

In both instances Nathan is aware that that line of text placeholds a message. His attempts to mean are related to that print on the page and are closely tied to the particular parameters of the story.

As we have seen in the reading responses to the 3 stories, Nathan has negotiated what print he is attending to today.

In a story writing task in our N.I.E. study, children and the researcher each used pen and paper to write their stories. As researcher I observed that children in this task where they were the writers seldom responded "I can't read" but eagerly

I'd like to go to
California and shoot
people. Throw an
elephant at the tiger.
And threw the bomb
at the boat. And shoot
the gun at the boat.

5.10 (Continued)

TEXT	SUPPORT MATERIALS

read what they wrote. It appears that where the child has personal responsibility for the task of writing it makes the reading task more manageable. Where we have assumed we are making the writing task easier by being the scribe in the Language Experience task, we might actually be making the reading task less approachable.

The response of Nathan, "Anyways I can't read" was a response used by some children of all ages to the Language Experience tasks in the Proffitt, N.I.E. and my N.C.T.E. Longitudinal Study of which Nathan is a subject. This phenomenon needs further study.

Strategy 2 is called Editing.

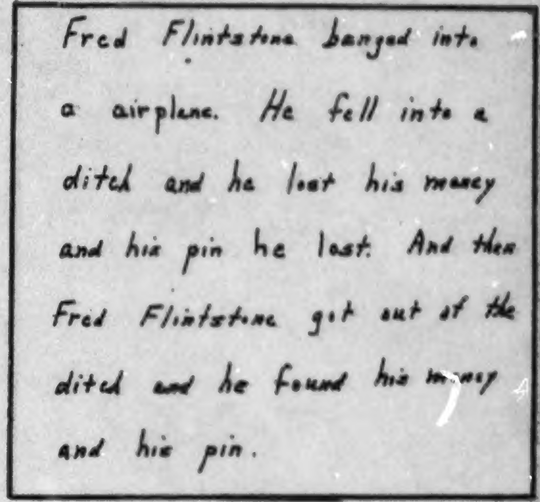
As readers of their own compositions children use the strategy of editing each time they read the text. Editing means that each reading session becomes a new setting for refining, elaborating, extending and coordinating meaning.

5.10 (Continued)

TEXT **SUPPORT MATERIALS**

In both story 3 and 5 Nathan uses editing as a strategy each time he reads the story. I'll use story 5 to illustrate the semantic monitoring which Nathan, age 5.1, is doing. His dictation reads:

(Show story #5 overhead)



Fred Flintstone banged into a airplane. He fell into a ditch and he lost his money and his pin he lost. And then Fred Flintstone got out of the ditch and he found his money and his pin.

> Fred Flintstone banged into a airplane. He fell into a ditch and he lost his money and his pin he lost. And then Fred Flintstone got out of the ditch and then he found his money and his pin.

Comparing reading to dictation his story reads:

> Fred Flintstone was riding by and he crashed into a airplane. And he fell into a ditch and then he got out and he walked and he walked and walked and walked and walked and walked and walked. Then finally he found his money and pin.

In this reading, it is not as clear

5.10 (Continued)

TEXT	SUPPORT MATERIALS

where Fred Flintstone lost his money. The re-reading shows Nathan re-examining his text and making changes from his initial composition.

> Fred Flintstone was riding down the road and he came to a airplane and he fell into the ditch. He finally got out and he kept walking and walking and walking and walking and walking until he found his money and pin.

In this reading we are not clear why he fell in the ditch and where he lost his money.

Looking at the same three texts for the basic units of meaning, I did propositional analysis à là Kintsch, Turner and Green.

This figure of the 1st sentence of each text illustrates how Nathan continues to re-think, re-explicate in his attempt to mean. In dictation there was 1 proposition, in reading 3,

(Show Propositions for first sentences in each text.)

	DICTATION	READING	REREADING
Text	Fred Flintstone banged into a airplane.	Fred Flintstone was riding by and he crashed into a airplane.	Fred Flintstone was riding down the road and he came to a airplane and he fell into the ditch.
Proposition	1. (BANG INTO, F.F., AIRPLANE)	1. (RIDE BY, F.F., Ø) 2. (CRASH INTO, F.F.^{A}, AIRPLANE) 3. (CONJ: AND, (1), (2))	1. (RIDE DOWN, F.F., ROAD) 2. (COME TO, F.F.^{A}, AIRPLANE) 3. (CONJ: AND, (1), (2)) 4. (FALL INTO, F.F.^{A}, DITCH) 5. (CONJ: AND, (3), (4))

5.10 (Continued)

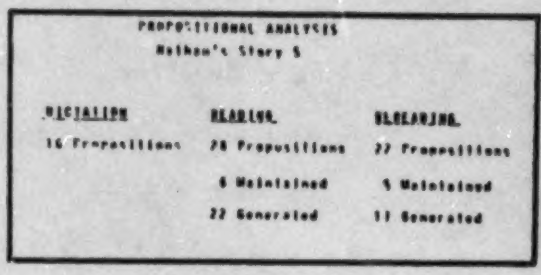
TEXT	SUPPORT MATERIALS

and re-reading 5. He maintained no propositions from dictation through the 2 readings but generated new ones for each text.

Propositional analysis of total texts shows the same active generation of new units of meaning within the same semantic parameters.

Dictation	Reading	Re-reading
16 Propositions	22 Propositions	22 Propositions
	6 Maintained	5 Maintained
	22 Generated	17 Generated

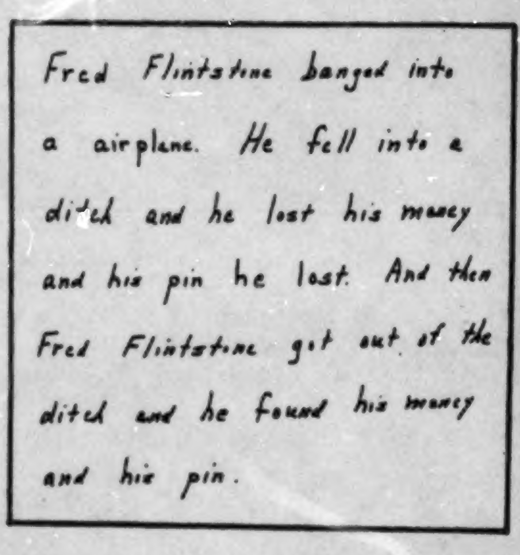
(Show Propositional Analysis Figure)


PROPOSITIONAL ANALYSIS
Nathan's Story 5

DICTATION	READING	REREADING
16 Propositions	28 Propositions	22 Propositions
	6 Maintained	5 Maintained
	22 Generated	11 Generated

Some adult judges might say that the story dictation seems to be the best formed story. To some the reading texts may seem like regressions since the texts lacked clarity on where money was lost and why F. F. fell into the ditch. By holding an adult template "of well formed story" over children's products we tend to overlook the processes and strategies

(Show story #5 again)


Fred Flintstine banged into a airplane. He fell into a ditch and he lost his money and his pin he lost. And then Fred Flintstine got out of the ditch and he found his money and his pin.

5.10 (Continued)

TEXT	SUPPORT MATERIALS

they are using to mean.

Yes, some story texts do stand better alone than others. But, each text generated by Nathan for this 5th Language Experience task did have the same semantic parameters. Each encounter dictating, reading and rereading allowed him to orchestrate his concept of story, knowledge of language systems, and the pragmatics of this research context in order to extend and coordinate meaning.

To Conclude:

1. Four of Nathan's stories did not fit the adult template of fictional story. But, by studying closely his compositions and readings of the stories, Nathan has given us, the researchers, new insights into the continuum authors follow in communicating through print.

5.10 (Continued)

TEXT	SUPPORT MATERIALS

2. In looking at Nathan as a writer and a reader we have seen the inter-relationship of the reading and writing task. In the task of writing, a person experiences how another person thinks and this sets the person up for comprehension. Through the reading process one learns the editing process necessary in writing.

3. If we really want to understand the child's concept of story, we need to look at story composition in different contexts—i.e., writing own story, writing story from pictures, or reading a book to name several. Each of these different contexts allows the child opportunity for examining and using alternate features of standard convention.

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> "Possibly the most important parental contribution was that even though some of them worried about the development of bad spelling, all of the parents accepted the child's spelling as a creative production and offered adult spelling only when the child asked for it."

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7.1 RESEARCH TASK DIRECTIONS

Task 1: Environmental Print

Task Sequence

Condition 1	Condition 2	Condition 3
Packaged products	Two dimensional graphics removed from products	Typed print

Researcher Script

Condition 1

1. What do you think this says?
2. What things do you see that help you to know what this says?
3. Tell me some of the things you know about this.

Condition 2

1. What do you think this says?
2. What things do you see that help you to know what this says?

Condition 3

1. What do you think this says?

7.1 (Continued)

Task 2: Language Experience Story

Task Sequence

1. Talk about favorite stories.
2. Display toys and discuss generally.
3. Pick 1 to 3 objects.
4. Dictate to scribe.
5. Re-read story.
6. Re-read one day later.

Sequences to be videotapes.

Researcher Script

1. I really like the story about Angus and the Cat. When the Cat first comes to live in Angus' house they fight. They fight over the food, and they fight over the places that they want to sit. The Cat hits Angus and Angus chases the Cat.

   But one day when the Cat disappears, do you know what happens? Angus gets lonely. He misses the Cat and he's very happy when the Cat comes back.

   Another story that I really like tells all about Cats and Kittens. It tells how cats and kittens are alike. It tells that they both like milk, that they both hunt, and even that they both get mad.

2. What story do you like? What do you like especially about ____________________________?

3. Today you are going to make up a story. I have lots of things in this box that you can use to tell a story. (Show child objects in box).

4. Choose 2 or 3 things that you want to use in your story. Look at the things you've chosen and take a minute to think about the story you're going to tell.

5. Now you tell me your story and I'll write it down on the paper while you tell it. What do you want me to write first?

6. Here is your story. Read it for me.

7.1 (Continued)

---------------------------ONE DAY LATER------------------------

7. Yesterday you chose some toys and wrote a story for me. What was your story about? (If you are having trouble remembering, why don't you think first about the toys you chose?)

8. Here is your story. (Put paper(s) on reading stand). Now read or pretend to read your story for me.

Materials:

- box of toys
- writing paper and pencil
- videotape

7.1 (Continued)

Task 3: Uninterrupted Writing and Drawing

Task Sequence

Child is given blank paper and choice of pencils.

1. Write your name for me.

2. Now write or pretend to write anything else that you can write.

3. Can you write anything else? (repeated until child stops process)

4. Read me what you wrote. Show me what you wrote.

Child is given blank paper.

5. Draw a picture of yourself so that I can take it with me.

Directions for Observer

1. Using Observation Sheet and record with blue pencil each item produced by the child, placing it in an appropriate section of Observation Sheet.

2. Number each item designating sequence of production.

3. Note any significant behaviors or comments of child in relationship to item produced.

----------------During child's re-reading----------------------

4. Record with red pencil each item read by child, placing notation above appropriate text (blue) item.

5. Number each item read designating sequence of production.

6. Note any significant behaviors or comments of child in relationship to item produced.

Materials:

- unlined paper, pencils, crayons (child will have a primary and regular pencil available from which to choose)
- audiotape/videotape
- observer/recorder sheet

7.1 (Continued)

Task 4: Reading a Book

Task Sequence:

1. Look through book, Ten Little Bears.
2. Read or pretend to read the book.

Researcher Script:

1. Here is a book that has a story in it. I want you to look through the book and find out about the story. When you have decided about the story I want you to read or pretend to read the story to me. While you're looking at your book I'll look at a book. (Researcher reads in silence while child reads.)
2. Now turn to the beginning of your story. (Wait until child has book prepared.) Read or pretend to read your story to me.

Materials

* copy of Ten Little Bears
* book for researcher

7.1 (Continued)

Task 5, Phase 1: Receiving and Reading a Letter

Task Sequence:

1. Child receives letter in envelope.
2. Read or pretend to read letter.

Researcher Script:

1. Here is a letter that ____________________ has sent to you.
2. Open your letter and read it to yourself. (Silence while child reads.)
3. Now, read or pretend to read your letter to me.

Materials:

* letter addressed to child

Task 5, Phase 2: Writing and Reading a Letter

Task Sequence:

1. Compose letter.
2. Read letter.
3. Address envelope.
4. Read envelope.

Researcher Script:

1. Today we are each going to write a letter. I am going to write a letter to _______________. Who are you going to write a letter to?
2. All the things you need to write a letter are on the table. (Child and researcher write their letters).
3. Read your letter to me.

7.1 (Continued)

4. Now, fix your letter so that it's ready to mail.

5. Now, read it (the envelope) for me.

---

6. I need to keep a copy of the letter that you wrote. So I'll mail your letter for you.

Task 5, Phase 3: Writing and Reading a Story

Task Sequence:

1. Write story.

2. Read story.

Researcher's Script

1. Here's a piece of paper for you, and one for me. We're going to write stories. I'll write a story on my paper and you write, or pretend to write, a story on your paper. Then, when we're done, we will read our stories to one another.

2. Silent writing--researcher and child.

3. Now, read your story to me.

4. Researcher reads story to child.

Materials

* blank typing paper
* pencil

Sample Characteristics
Lower Socio-economic Status[1]

Name/Reg. No.	Age	Sex	Birthdate	Race	Education Level Mother	Education Level Father	Occupation Mother	Occupation Father
Leatrice/#21 P	3	F[2]	4-17-76[3]	B[3]	10	--[5]	Housewife	------
Marvin/#22 P	3	M	7-29-76	B	11	12	Labor	Line Worker
Nathan/#23 P	3	M	7-27-76	W	12	8	Housewife	Common Labor
Terry/#24 P	3	M	4-29-76	B	11	--	Line Worker	------
Patty/#25 P	3	F	6-20-76	W	10	--	Housewife	------
Tuwanna/#26	3	F	5-19-76	B	10	--	Floor Clerk	------
Kibi/#27	4	F	6-21-75	B	10	12	Clerk Typist	Warehouse Worker
Angie/#28 P	4	F	7-20-75	W	9	12	Housewife	Unemployed
Benjamin/#29	4	M	6-24-75	B	9	9	Kitchen Supervisor	Lay-Off; Chrysler
Charles/#30 P	4	M	4-7-75	W	12	10	Insurance Clerk	Newspaper Handler
Michael/#31 P	4	M	4-7-75	W	12	10	Insurance Clerk	Newspaper Handler
Stephanine/#32 P	4	F	7-28-75	W	9	--	Housewife	------
Greg/#33 P	5	M	8-28-74	B	6	--	Housewife	------
Angela/#34 P	5	F	6-20-74	W	10	--	Housewife	------
Dan/#35	5	M	9-27-74	W	12	8	Housewife	Plasterer
Dawn/#36	5	F	9-27-74	W	12	8	Housewife	Plasterer
Crystal/#37 P	5	F	4-18-74	B	12	--	Sales	------
Frank/#38 P	5	M	6-22-74	B	12	--	Nurse's Aide	------
Christopher/#39 P	6	M	5-18-73	W	12	12	Housewife	Inspector-Ford
Gerald/#40 P	6	M	3-21-73	B	10	11	Line Worker	Navy
Deshonna/#41	6	F	9-10-73	B	10	--	Housewife	------
Latisha/#42	6	F	8-6-73	B	12	11	Housewife	Bus Driver
Gina/#43 P	6	F	7-25-73	W	6	12	Housewife	Checker-Ford Motor
Vincent/#44 P	6	M	8-28-73	W	12	12	Teacher's Aide	Custodian

[1] The following criteria were used in the selection of SES:
- A) Years of formal education completed by parents (low SES = high school or less)
- B) Parental occupation (needed to fall within low prestige occupations as listed by Duncan, 1971)
- C) Income. All children selected came from families which qualified for federal assistance based on total income and family size at their respective school; all children 3, 4, and 5, with the exception of 3 (Kibi, Michael, and Charles) came from families whose total income qualified them for 80% federal subsidy of their child's preschool program.
- D) Residence. All children in low SES sample came from School 114 attendance area, a lower class neighborhood in Southeastern Indianapolis. Children bused into School 114 were excluded from the sample. Most children lived in Federal Housing Projects which bordered School 114.

[2] F=Female; M=Male

[3] Only children who ranged in age 3.0-3.6, 4.0-4.6, 5.0-5.6, 6.0-6.6 at the time of data collection were included in the sample population. This criterion meant that only children born between March and August were included in the population sampled.

[4] B=Black; W=White

[5] Single parent families

Sample Characteristics
Middle Socio-economic Status[1]

Name/Reg. No.	Age	Sex	Birthdate	Race	Education Level		Occupation	
					Mother	Father	Mother	Father
Shannon/#45 P	3	F[2]	4-3-76[3]	W[4]	12	14	Computer Operator	Small business-Owner
D.J./#46 P	3	M	5-24-76	B	16	15	Postal Clerk	Factory Worker
Robert/#47	3	M	4-17-76	W	12	12	Secretary	Env. Control Specialist
Jerry/#48 P	3	M	5-7-76	W	13	14	LPN	Journeyman
Tasha/#49 P	3	F	5-27-76	B	14	12	Fork Lift Operator	Painter
Heather/#50	3	F	6-3-76	B	12	12	Assembler	Machinist
Misty/#51 P	4	F	7-6-75	W	12	12	Driver	Security Manager
Ben/#52 P	4	M	9-29-75	W	17	17	Teacher	Teacher
Mike/#53	4	M	7-22-75	W	12	12	Assembler	Machinist
Tausha/#54	4	F	3-23-75	B	14	16	Secretary Supervisor	Musician
Brandyce/#55	4	F	9-2-75	B	12	16	Secretary	Small Business-Owner
Charvin/#56	4	M	9-30-75	B	16	16	Teacher	Accountant
Sally/#57 P	5	F	7-9-74	W	17	16	Teacher	Finance Manager
Jill/#58 P	5	F	5-29-74	W	12	12	Secretary/Bookkeeper	Supervisor
Alpha/#59	5	F	4-14-74	B	17	16	Psychological Consul.	Government Accountant
Jeff/#60 P	5	M	5-23-74	B	12	12	Order Analyst	Screw Machinist
Donald/#61	5	M	9-4-74	B	14	17	Communications Spec.	Teacher
Jason/#62	5	M	7-11-74	W	12	13	Secretary	Taxi Driver
Jake/#63 P	6	M	9-1-73	W	16	19	Housewife	IBM
LaShell/#64 P	6	F	8-8-73	B	15	14	Teacher	Parts Inspector
Eugene/#65 P	6	M	8-20-73	B	14	15	Cashier	Greyhound Bus Driver
Natasha/#66 P	6	F	5-17-73	B	15	15	Secretary	Dock Supervisor
Marc/#67 P	6	M	7-18-73	W	15	16	Police Officer	Social Ins. Rep.
Alanna/#68 P	6	F	7-26-73	W	15	12	Legal Secretary	Machinist

[1] The following criteria were used in the selection of Middle SES:

A) Years of formal education completed by parents (Middle SES = high school or more, but not above Masters).
B) Parent Occupation (needed to fall within or very near middle prestige occupations as listed by Duncan, 1971).
C) Income (families of children selected did not qualify for federal assistance; several families where occupation and years of formal education just met our criteria for middle SES occupation and education sent their child to a private school for day care of preschool and thus were included in the middle SES sample--this was true of Heather (#50), Mike (#53), Jeff (#60), and Jason (#62).
D) Residence (all children in middle SES sample came from outside the immediate area surrounding School 114; most 3, 4, and 5 year olds were involved in private day care or preschool experiences which required a tuition for enrollment; several 6 year olds were bused to School 114 from outside areas; most children came from School 82's attendance area, a distinctly middle class residential area).

[2] F=Female; M=Male

[3] Only children who ranged in age from 3.0-3.6; 4.0-4.6; 5.0-5.6; 6.0-6.6 were included in the sample population. This criterion meant that only children born between March and August were involved in the population sampled.

[4] B=Black; W=White

Sample Charactersitics
Summary Statements

Race and Sex

		3 year olds		4 year olds		5 year olds		6 year olds		
		Male	Female	Male	Female	Male	Female	Male	Female	
Middle SES	Black	1	2	1	2	2	1	1	2	12
	White	2	1	2	1	1	2	2	1	12
Lower SES	Black	2	2	1	1	2	1	1	2	12
	White	1	1	2	2	1	2	2	1	12
		6	6	6	6	6	6	6	6	N=48

Parental Education

Lower SES--8 fathers and 14 mothers had completed less than a high school education (12 years).

6 fathers and 10 mothers had completed high school (12 years).

Middle SES-8 fathers and 9 mothers had completed high school. The remaining 16 fathers and 15 mothers had completed some work beyond high school.

9 fathers and 6 mothers had completed 4 years of college (16 years or more).

Family Status

Lower SES--2 children are living with a guardian other than their natural parents.

3 children come from families which school officials suspect of child abuse either because of events which have happened to this child or because of events which have happened to other children in the family.

10 children come from single parent families; all single parent familes were headed by a female.

Middle SES-All childrem came from 2 parent families. (Although this was not a criterion used in selection, the actual sample chosen did not include any single parent families. 6 single middle SES parents did return permission slips volunteering their child's participation in the study. In comparison to the lower SES sample, far fewer middle SES homes in the population samples were single parent families. This, then, is clearly one major difference between our middle and lower SES samples, but may as such reflect real difference between lower and middle class life style).

7.3 DATA COLLECTION SCHEDULE

7.3.1 Videotaping Schedule

Day 1

- Read a Book
- Uninterrupted Writing
- Uninterrupted Drawing

Day 2

- Environmental Print - Condition 1
- Write a Story

Day 3

- Environmental Print - Condition 2
- Language Experience Story
  - Write
  - Read
- Read a Letter

Day 4

- Environmental Print - Condition 3
- Language Experience Story
  - Reread
- Write a Letter

Data Collection Schedule

September 28:	Take remote video equipment to Indianapolis and install in School 114
October 12:	Orient videotape group
October 15-18:	Videotape 1st group (5 subjects)
October 19:	Orient new videotape group
October 22-25:	Videotape 2nd group (6 subjects)
October 26:	Orient new videotape group
October 29-November 1:	Videotape 3rd group (7 subjects)
November 2:	Orient new videotape group
November 5-8:	Videotape 4th group (7 subjects)
November 9:	Orient new videotape group Move equipment to Little People's Prep and install
November 12-15:	Videotape 5th group (12 subjects)
November 15:	Orient new videotape group
November 16, 19-21:	Videotape 6th group (11 subjects)
November 26:	Catch-up videotape session for any children who were ill in last taping group
November 28:	Bring video equipment back to Bloomington

Parent Interview

Parent/Child Encounters with Language in the Home

1. We are interested in the experiences children have that help them learn to read and write.

   Tell me about any things helpful to learning to read and write that someone has done with ____________________.

2. Tell me about any things helpful to reading and writing that ________________ does by _____self.

   Does ______________ watch TV much?

   What programs does ____________________ watch?

Professional Agencies Involved in Language Instruction

3. What schools or programs has _______________ attended?

   What instruction in reading and writing did/does ___________ receive there?